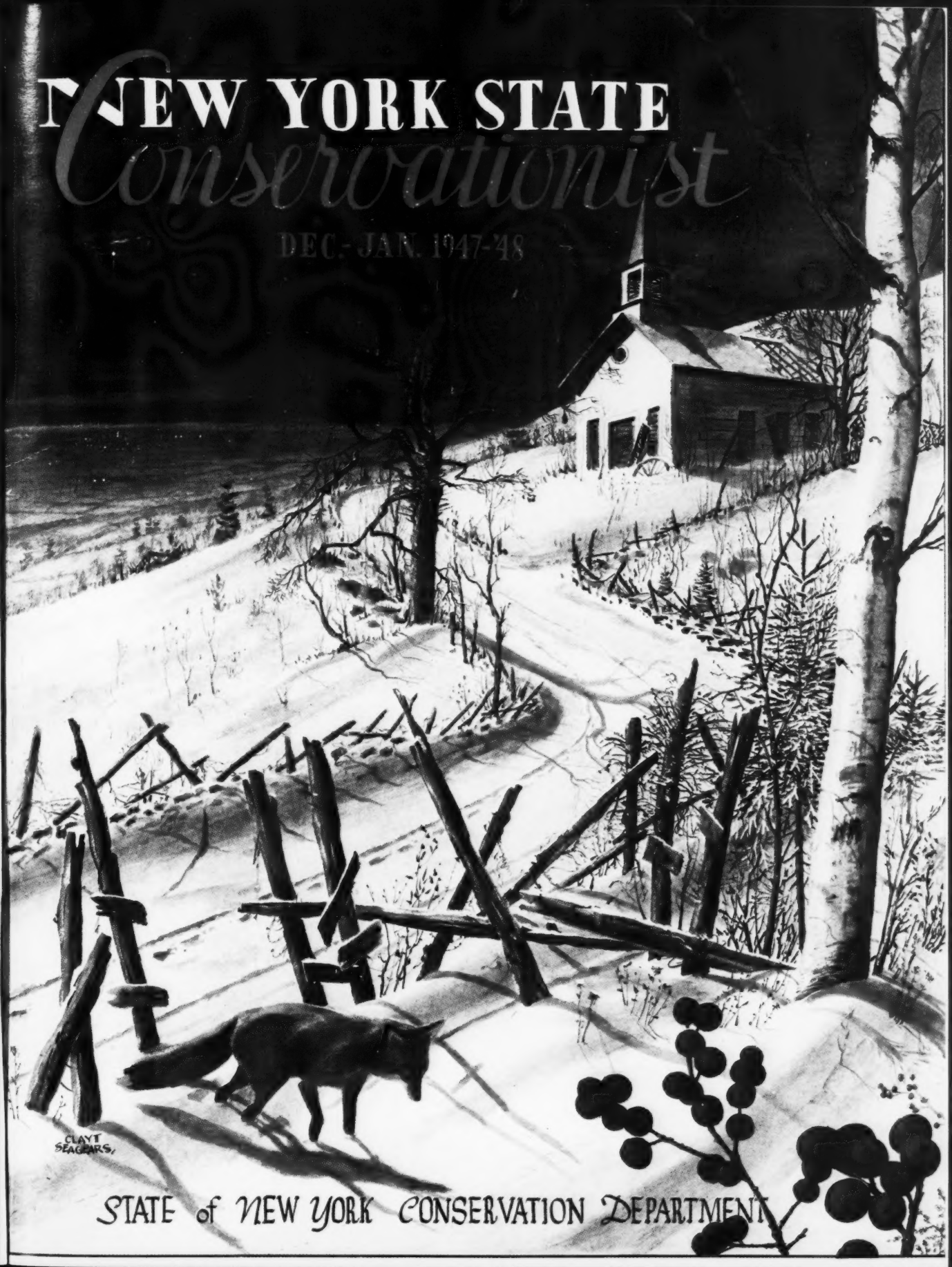
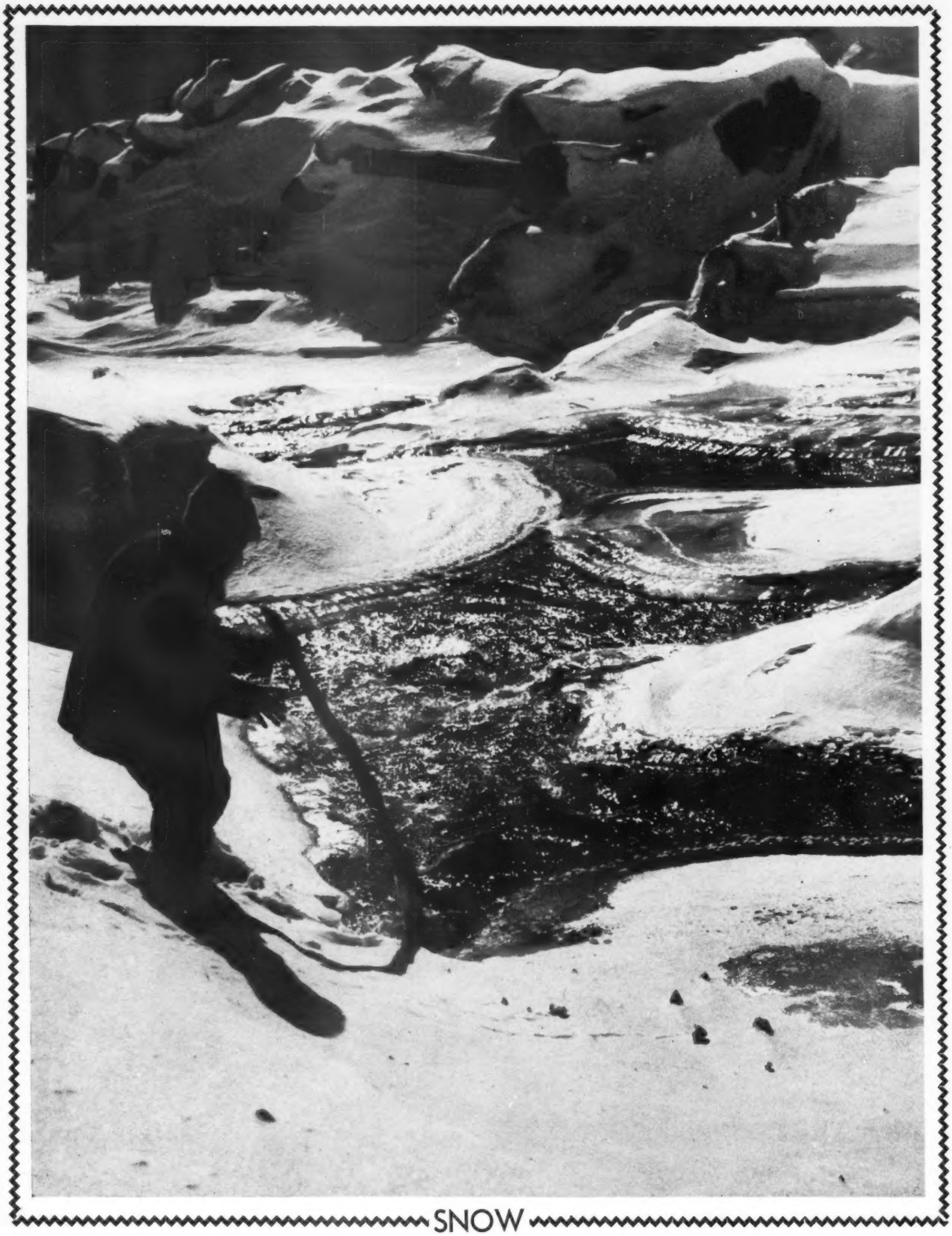
NEW YORK STATE Conservationist

DEC.-JAN. 1947-'48



STATE of NEW YORK CONSERVATION DEPARTMENT



Noah Rondeau on Cold River. He sinks his canned goods in the river, where they won't freeze.

More About This Magazine

A few weeks ago a man in Syracuse wrote a letter to his local paper in which he made some remarks about this magazine. He said it was a propaganda sheet, and then he raised the question of whether it was worth its salt to the taxpayers. He doubted it.

Now then, we don't think it necessary to strike an editorial blow in defense of our 32 pages, but it might serve a useful purpose if we were to trade a few jabs with the man from Syracuse. It might make it a little clearer where we stand. So:

In the first place, this is primarily a trade journal for Conservation, intended to promote the trade, not the journal. So straight off we plead guilty to the first charge and admit that this is indeed a propaganda sheet. Right in this issue you'll find four solid pages of propaganda for the whitetailed deer, and incidentally, the taxpayer who wants this information won't find it anywhere else.

But we are trying to do more than just circulate information. As true propagandists, we're trying to convince people that Conservation is a matter of importance to everybody, and if at times we seem to stray rather far afield just remember that Conservation is a bigger field than most people think, and anyway, we're reaching out to make new friends. Conservation needs new friends.

How are we going to win them over? We feel that one way of doing it is to make our magazine interesting as well as factful, diversified as well as technical, attractive and even amusing as well as informative, in the hope that a few people may pick it up that would otherwise have passed it by.

Who knows but what they might pick up Conservation, along with the Conservationist? Anyway, we think it's worth trying.—Editor

HOW TO SUBSCRIBE

Print clearly your name, street and number, city and state, and send this address with $1.00 (check, money order, or cash at sender's risk) to the Conservationist, N. Y. S. Conservation Dept., Albany 7, N. Y.

No stamps, please.

VOL. 2, NO. 3 DECEMBER-JANUARY 1947 1948

STATE OF NEW YORK
THOMAS E. DEWEY, GOVERNOR
Published Bi-Monthly By the
CONSERVATION DEPARTMENT

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The Conservationist is an official publication of the N. Y. S. Conservation Dep't., published every two months at the Department's offices, Arcade Bldg., Albany, N. Y. No advertising accepted. Subscription rates $1.00 per year. Entered as Second Class matter July 24, 1946 at the Post Office at Albany, N. Y., under Act of March 3, 1879.

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THE majestic progress of weather is more predictable in winter than in summer, being subject to fewer local disturbances. Weather always moves in a big way, but in winter, more so.

Therefore "Farmer" Dunn surveyed his weather maps with a feeling of apprehension. It was already raining but the maps indicated that there were still two storms that hadn't hit New York; one moving east from the Great Lakes, and another coming up the coast from Georgia. It seemed likely they would meet somewhere over Jersey, probably the next day.

They met on schedule. On March 11 "Farmer" Dunn, who was in charge of the Weather Bureau in New York City, watched the rain change to snow as the thermometer fell like a brick and the wind came up out of the northwest. Two days later Mr. Dunn's anemometer showed a wind of 57 miles per hour, his thermometer read four above, and no instruments were required to find out that it was still snowing hard.

The Great Blizzard of '88 had mightily arrived.

For elemental ferocity and just plain snow, our State has never had anything that could hold a candle to that affair. Over the eastern part of the State and a large section of New England four feet of snow fell in four days, and the drifts sometimes piled up to 50 feet. Business and traffic stopped and communications became indirect; New York City got in touch with Boston via the London cable.

Although the storm was infinitely worse in other areas, it was Manhattan that was most disconcerted by it. Practically nobody ventured forth except Senator Roscoe Conkling, an ice man, and President Taft's brother. Senator Conkling started walking from Wall Street, got lost in Union Square, and three hours later staggered into his hotel on 25th Street, where he died not long after. The ice man represented the only delivery service that continued to function on 31st Street; at the height of the storm he deposited suitable cakes in front of each house. President Taft's brother, with the Brooklyn Bridge blocked, walked across the East River on the ice.

But almost everybody else either stayed home or fought their way into the Astor House. If at home they walked in and out their second story windows. If in the Astor House they got tight and slept on the lobby floor. One character got caught in the old Madison Square Garden and sat through five consecutive performances of Barnum and Bailey's Circus, which opened the same night the Blizzard did. He said it was an excellent show, a splendid blizzard, and he had no reason to go home anyway.

As in 1888, so now; snow gets a mixed reception in our State. The people in Lake Placid and North Creeek pray for it, because what with skiing and all, it's their life blood. On the other hand Mayor O'Dwyer doesn't care for it because after the Lord delivers it he has to gather it up and cart it away. The Public Works Department feels the same way, and most upstate towns have to carry a separate item on their budgets for snow clearance. Almost everywhere, a White Christmas is nice, but expensive compared to a brown one.

Even the farmer has a divided opinion about snow. There's no question but what it complicates the problem of just getting around, in fact a heavy snowfall completely alters the pace of country life. On the other hand snow is the poor man's fertilizer, which is the usual way of saying that the farmer gets his nitrogen for free. And on snow he can skid logs and sled syrup, and also spread manure so that when the thaw comes it will be diffused into the soil, instead of sitting around in the original concentrated form, a hiker's hazzard.

But above all snow is a thermal blanket spread like an eiderdown over a cold country. It keeps the soil warm. Experiments have shown that at low outside temperatures the temperature of the soil, one foot down, is 30 degrees warmer under a good blanket of snow than without it, other conditions being equal. This is important. It is important not only to the soil but to all the life that winters on it or in it above the frost line, which includes almost all the life in New York except the woodchuck and the subway operator.

THE man who really looked into his thermal blanket was Mr. W. A. Bentley, of Jericho, Vermont. Just about every time it snowed Mr. Bentley used to go out and catch some flakes on a black board. Then he took microphotographs of them. He wasn't the first to discover the miraculous, six-sided designs in these snow flakes, or ice crystals, but although he was more interested in the designs themselves he also proved that they were formed around air cavities within the crystal, which is where the thermal blanket comes in. Air, imprisoned in ice, is just as good an insulator as air imprisoned in anything else.

Incidentally, not all snow falls to earth. Cirrus clouds—those high, streaky clouds that form out of a clear sky—are composed entirely of ice crystals. And halos around the sun and moon, often

portents of storms, are caused by light being refracted through ice crystals miles above the ground.

As indicated, the thermal blanket is important to all life, which includes wildlife, which includes everything from beetles to bears. Exhaustive research has unearthed only two accounts of what happened to the animal world during the Thermal Blanket of '88 and these accounts are herewith offered at face value: (1) In New York City, a gentleman met four horses in front of the Astor House and shared a quart of whisky with them; unfortunately there is no record of what happened next. (2) In Hartford, a certain Mrs. Brusselaers gave what is probably the longest tea party on record; her 12 guests stayed four days and ended up by eating 75-100 English sparrows that had sought refuge under the porch. Mrs. Brusselaers contrived a sparrow pie.

IT is admitted that these accounts do not give a complete picture of what happened to wildlife during The Blizzard, so we can only speculate. But if "Farmer" Dunn had had a rabbit in his office, and if the rabbit had felt like talking, it could probably have told the weather man there was a storm coming. When it comes to weather most animals, and birds too, have a sixth sense—possibly a sensitivity to changes in barometric pressure—and they make their plans accordingly. The plans are simple and worthy of consideration by higher species: eat and drink to absolute maximum capacity, then sit out the unpleasantness in some comfortable spot.

Not all animals do this, however. The porcupine is a notable exception. It appears to be indifferent to weather and almost everything else and can often be seen riding out a snowstorm in the top of a tree, swaying back and forth, singing happily to itself, and eating withal. But if you see deer feeding at high noon when they should be lying down, you can look for rough weather the next day. Grouse and pheasants, and even chickadees, fill their crops in anticipation of lean times ahead. And red squirrels, which are inclined to waste a good deal of time and put things off till the last minute, suddenly get a feeling they are about to be caught short. This feeling produces a frantic burst of cone-collecting and other industry.

These last minute preparations are in addition to the seasonal movements made by almost all of the animal kingdom in anticipation of winter. These movements are more extensive than commonly realized. Most people know that failing light and falling temperatures induce birds to migrate south, but not so many know that insects also migrate — down out of vegitation toward the ground—where snow will protect them from abrupt changes in temperature. Many mammals, from mice to deer, desert their summer range and establish winter quarters near food and heavy cover. Others go even further; New York bats, woodchucks and jumping mice dodge the issue entirely and hibernate, while 'coons, chipmunks and bears become exceedingly dopey.

Whatever the arrangements for winter, most of the animal world has completed them by the time the first snow flies. What then?

Then, nothing extraordinary; if our native species couldn't adapt themselves to snow, and snow in considerable quantities, they wouldn't be native to New York. It's true that for the pheasant and the Adirondack deer snow can be critical, but it's worth noting that the pheasant is not native to New York and that there probably wouldn't be many deer in the Adirondacks if they hadn't been crowded off more favorable range. Still, for pheasants and Adirondack deer, snow can be critical.

The trouble with pheasants is that they are ground-feeding birds, and a crust of snow can cut them off from their source of supply. Under such conditions they have to rely on shocked corn, burdocks, ragweed and the seed-filled manure that many a farmer scatters on the snow. Pheasants regard this as manna from heaven, and keep an eye out for the manure spreader.

With deer in the Adirondacks, the problem is one of mobility. The greatest accumulation of snow comes in March and early April—at the time when the deer herd is physically at its lowest—and the necessity of floundering through three or four feet of snow is sometimes the straw that breaks the camel's back. In the spring of 1944 deer mortality in the Moose River area was 21.8 animals per square mile.

But for most of our species snow is an asset rather than a liability, providing warmth and cover. Even for deer it can be advantageous, because if they can travel around on top of a deep snow a whole new level of browse is brought within easy reach. Rabbits also take advantage of such an opportunity, and field mice often use snow as a ladder to new and succulent apple bark.

The snowshoe rabbit, which becomes nervous and irritable if it turns white before the ground does, is now in its element; so also is the weasel. The grouse, with his food well above the snow line, travels around on newly acquired snowshoes, and tunnels, or plummets from full flight, into a snow bank (where he very rarely stays long enough to be sealed in by a crust). The fox, light-bodied and fluffy-furred, travels easily; the cottontail, more compact, not so easily, but a snow-covered brush pile is a nice place to sit and think, and there's plenty of time.

AND down on the farm Boozer the Hound, an exceptional specimen, stretches himself, gives an extra scratch behind the ear, and starts off into the hills ahunting, happy in the thought that of all the predators only he and man and maybe an occasional fox can track visually, rather than by scent. Last night's snow is going to save him a lot of wear and tear on his schnozzle.

—P. W. FOSBURGH

The day after Christmas ninety-nine million tons of

* **Snow** *

fell on New York City. This was a mess. But it wasn't a blizzard, and the 25.8 inches of ice crystals that fell on the city—although a local record—can't compare with the 46.7 inches that fell on Albany, for example, during the Blizzard of '88.

Anyway, snow in reasonable quantities is a good thing for the average New Yorker, be he man or beast.

The Status of Game

A last-minute, post-season report from our District Game Managers*

ADIRONDACK DISTRICT

Deer: The principal species in this district. Take of bucks this year directly reflected the effect of closing the woods for the first 10 days of the scheduled season: outside hunting slumped because of cancelled vacations and wintry conditions during extension of season.

Local hunting pressure increased in all counties. Because of increase in deer herd and good tracking snow, hunting success slightly better than in 1946. Greatest kill during second and third weeks of season, with unusual number of spikehorns reported taken.

Grouse: As abundant as last year, but no concentrations of birds, and therefore poor hunting success. Relatively few hunters afield.

Snowshoes: More abundant than in 1946. Increased spot lumbering of hardwoods has resulted in good distribution of hares. Early hunting success good, tapering off because of deep snows in second week of December.

GREENLEAF CHASE

ALLEGANY DISTRICT

Deer: Hunting conditions good with snow and wet. No deep penetration from roads first two days due to rain, sleet and snow. Believe buck kill will be less than last year. Observing hunters commenting on more does than bucks.

Bear: Take about same as in 1946. One taken on Hanging Bog Game Management Area where bear seldom seen. Hunting conditions excellent.

Pheasants: Closed season fairly well observed. Observations report more birds in evidence than year ago.

Grouse: Hunting none too good, but improving. Impression birds are coming back.

Cottontails: Take considerably better than in 1946. Sportsmen aware population on the upgrade.

White Rabbits: In counties having open season, shooting fairly good. Observations note definite increase over previous years.

Squirrels: Not as productive as expected. Mast crop did not materialize.

Woodcock: In general district offered no really good woodcock shooting this fall.

Waterfowl: Native population about same as previous year. Areas supporting good waterfowl shooting at a minimum.

Foxes: Still numerous enough so that novice often gets a shot and collects one.

EARL A. WESTERVELT

CATSKILL DISTRICT

Deer: High take in all counties, probably higher than last year. Weather conditions good throughout season, with tracking snow several days. Plenty of deer left for next year.

Bear: Take appears higher than in 1946, especially in Delaware County. Many reports of bear activity.

Grouse: More abundant than last year, but few birds taken because of difficult hunting conditions. Snow and wind tended to drive birds into trees.

Pheasants: Throughout the district, hunters reported better luck than last year, mostly because of released birds. Reports indicate more pheasants on hand at close of season than in past three to five years.

Cottontails: Very erratic. General trend in abundance is upward. Some hunters had excellent success while others had none.

Squirrels: Very few taken, and very few reports of squirrels seen anywhere in district.

Snowshoes: Too early to report, but hunters apparently taking more than in past few years.

Waterfowl: Hunting generally poor. Weather warm and fair in first period, better in second, but take in both periods was light. More mallards reported along the Hudson, but no heavy flights.

ALBERT G. HALL

LAKE PLAINS DISTRICT

Deer: Over-all population throughout the district somewhat higher than last year, in spite of extensive kill due to poaching. Legal take probably less than last year's due to unfavorable weather and to relatively light concentration of hunters.

Pheasants: No open season in this district except in test area (see page 30). Population somewhat higher than last year but definitely spotty. Slight increase possibly due to protection and more favorable breeding season.

Cottontails: Definitely on the up. Hunting success to date better than last year except for isolated spots. Population still very low by ordinary standards.

Gray Squirrels: Except in cities and towns, population lower than last year, though high in relation to the average.

Grouse: Little grouse territory in this district. Population extremely low but probably no worse than last year. Hunting success very poor.

Raccoon: Extremely numerous throughout the district, with hunting success excellent.

Foxes: Abundance continues high, though probably somewhat lower than last year. Sport of fox hunting becoming very popular in this district.

ROBERT F. PERRY

LOWER HUDSON DISTRICT

Pheasants: Slightly more abundant than last year, and take believed to be somewhat higher. Hunting pressure no heavier and perhaps less, due principally to closure of woods and dry weather.

Cottontails: Distribution somewhat spotty, but some improvement noted over last year. Take about normal to date.

Grouse: Not much cover in this district but birds considerably more abundant than last year. Hunting pressure about the same.

Waterfowl: First period too warm and dry, with few flight birds in. Normal hunting pressure and light take. Flight birds plentiful in second period, and take somewhat better than last year. Consensus of opinion is that there were more waterfowl along the Hudson this year than last.

Woodcock: Practically no native birds and no flight birds reported throughout the season or to date.

A. W. BROMLEY

EAST CENTRAL DISTRICT

Deer: Over-all population somewhat higher than last year. Take north of tracks reflects closing of woods for first ten days. South of tracks, take definitely greater with later season, hunting pressure quite severe. Deer-jacking in southern Albany, Columbia, Rensselaer, Washington, northern Saratoga counties continues serious. Over-all hunting success slightly lower.

Grouse: Slightly up over last year but distributed better. Hunting poor north of tracks first part of season; second half after woods opened, fair. Hunting pressure diminished second half north of tracks with large number deer hunters out.

Pheasants: Continue very low although slightly better than 1946. Good holdover of birds in Columbia County. Very few birds in Schenectady County and not much better in eastern and northern Albany and western Rensselaer counties.

Cottontails: General population is up but still at low point. More seen than in four or five years in some spots. Better hunting success than in some time.

Gray Squirrels: Still down but plentiful in spots, Hunting success fair to good in some areas.

Foxes: Rabies still almost absent from district although one infected fox was caught near Scotia. Same is true for Ft. Plain where three rabid foxes were found and spot trapping done. Over-all picture shows foxes almost as abundant as last year.

'Coons: Extremely high population throughout district. Hunting success has been good.

ASA H. SMITH

NORTH CENTRAL DISTRICT

Pheasants: Still scarce throughout the district, and in some sections perhaps more scarce than last year. In general, however, no notable change from last year.

Cottontails: Still scarce in most sections, although some improvement noted in parts of southern Madison, Oneida and Onondaga counties. With these exceptions, picture is the same as last year.

Grouse: Birds spotty in both northern and southern zones, but in general abundance slightly greater than last year, particularly in the southern zone. Still below normal in both sections.

Woodcock: Good supply of native birds, but flight birds were spotty.

Ducks: Native blacks above normal. Flight birds scarce, as reflected by the kill in Oneida Lake State duck blinds.

Squirrels: Above normal.

Deer: Not much change noted from last year.

BEN O. BRADLEY

SOUTH CENTRAL DISTRICT

Pheasants: More numerous than year ago; still scarce. Hunting success little better but handicapped by extremely warm, dry weather.

Cottontails: Definitely more abundant than year ago. Hunting success good.

Grouse: More abundant than year ago. Hunting success not too high. Birds strong, fat, saucy, ran a great deal, flushed from trees repeatedly.

Woodcock: Poor hunting. Birds left during cold snap of late September, early October. Fair shooting two days before fire ban. Flight went through during period or did not hit district.

Squirrels: Less than year ago but abundant. Hunting good.

Ducks. Large number local birds, higher than year ago. Good shooting first two days; fire ban killed rest of dabbling season. Poor shooting second half of season. Divers remained rafted in deep water, not in great numbers.

Geese: Large numbers on Seneca and Cayuga lakes first half season. Good field shooting first two days. Fire ban stopped this. Most of geese left, with few in for second half.

'Coon: Population still high. 'Coonhounders had excellent results.

Deer: Definitely more abundant than year ago. Tracking snow made good hunting conditions. Estimate kill substantially higher than year ago.

A. H. UNDERHILL

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*See June-July issue of The Conservationist for map showing counties in Game Districts.

Grist for the Mill

What are New York's immediate legislative needs in conservation? How can the primary tool for the management of natural resources—the Conservation Law—be improved at the present session of the Legislature? Some of the more obvious needs, as expressed at the recent Conservation Council convention and elsewhere, are:

✦

1—Adequate financing for fish and game services!

By now, this should be well understood. It's unnecessary to point out to any thoughtful person that income from a fee schedule set up 10 years ago is inadequate to meet the mounting costs of present day fish and game services. At the last legislative session, the State Conservation Council urged a reasonable increase in license fees to solve the problem. It was not enacted. As a result, this Legislature will have the same issue.

2—Broad legal authority to promote specialized practices benefiting fish and game on lands or waters available to the Department!

For example,—The Department is not in the farming business, yet good agriculture would benefit game on its management areas. Neighboring farmers could be attracted to provide such practices if share-cropping were possible—but it is not under present laws. There are many other variations of this problem. There should be a means of meeting them if the Department is to do its best for your fish and game.

3—Enactment of a new section to provide a practical means of controlling deer populations menacing both their own range and farm crops!

Committees of farmers and of sportsmen have jointly studied this question. They see a real need for new legislation. It should provide for the taking of deer of either sex—at the recommendation of the Department —in areas outside the Adirondacks and Catskills in order to keep the herd within the carrying capacity of its own natural range and also bring relief to harrassed farmers.

4—Legislation to prohibit possession of more than one day's legal limit of fish on waters of the State and their immediate shores!

On some of the Finger Lakes, scheming anglers "beat the rap" when they go out at 9 p.m. and come in at 3 a.m. with six lake trout—the limit for two days—by merely crediting three to the period before midnight and three to the hours after it. Up in the St. Lawrence-Lake Ontario region, some fishermen come in with 12 bass (two days' limit) and, if they have a Canadian license, claim they caught six on the American side and six on the Canadian side. There are similar incidents elsewhere.

5—Stiffer penalties for deer-jackers and market hunters!

Game law violations have soared to record levels, and cases involving deer-jackers make up a goodly portion. A long range solution to this problem involves an educational program over a period of years, designed to educate future sportsmen. Meanwhile, we must deal with present generation outlaws. An effective lesson would be to show them that their profits won't pay their fines.

6—Improvements in the management of the State's fur resources!

Among the subjects under consideration—by both Department technicians and the persons engaged in New York's fur industry—are: Extension of the zoning principle (heretofore applied to muskrats only) to mink, raccoon and skunk; changes in some of the open seasons for trapping; new regulations to further curtail illegal practices and activities, and a new system of dealers' licenses and reports.

The economic importance of the fur industry justifies every attention.

7—Better pollution laws for both health and conservation!

This long has been recognized as one of our greatest conservation and public health needs. By all odds, it is also the most complicated and controversial. Fortunately, the problem is in capable hands. A special legislative committee has been working steadily on it for over a year. Whether or not the committee will be ready to offer legislation at the present session is not now known—but, if it is possible to make the 1948 deadline, then this item should go to the top of the list, along with adequate financing.

8—A new forest tax law which will encourage modern forest management!

We have millions of acres of actual or potential forest land in this State—but the yield per acre is ridiculously low. The recently enacted Forest Practice Act is encouraging large numbers of forest and woodlot owners to practice modern forestry on their holdings. It is the belief of the Coordinating Forest Taxation Committee that further encouragement can be given by a more equitable forest tax law which defers at least a part of the tax load until the crop is harvested. A special group of the most eminent men in this field have been working on this problem for several months and may have something to offer the 1948 Legislature.

✦

These are pressing conservation problems. Others will undoubtedly arise before the Legislature closes next spring. If these problems are to be met, the closest teamwork will be required between the Legislature, the Council, the Department, the Conference Board of Farm Organizations and all other interested groups—which means all hands.

1948 Gift Preview

New and practical gadgets for the N.Y. outdoorsman

(THE NEW YORK STATE CONSERVATIONIST CANNOT UNDERTAKE TO ANSWER QUESTIONS FROM AGENTS REGARDING SALE OR MANUFACTURE OF THESE ARTICLES.)

✓ THIS VERY PRACTICAL DEVICE IS DESIGNED FOR DUCK HUNTERS ON COLD, RAINY DAYS. It has these triple features: (1) warms hunter (2) calls ducks and (3) makes hot water for tea or coffee. Water collects in upturned hat brim and feeds to boiler from which steam circulates through tubes and exits via quacking valve.

✓ COM-BINO-FLASK—FOR BIRD LOVERS. COMBINED FLASK AND BINOCULARS —ONE MOTION DOES BOTH.

Hangs from neck and thus is immediately available at the slightest bird. Teaball refills extra.

✓ THIS SIMPLE GADGET IS DESIGNED FOR THE ANGLER WITH A BOOT FULL OF WATER. SNAPS AROUND THIGH WHEN EMPTYING BOOT TO PREVENT USUAL ANNOYING DRAINAGE PROBLEM.

Simply carry on hat brim or use as sunshade—a Wetasco Product.

✓ ICE FISHERMEN: QUIT SHAKING. LET THE NEW SHAKERSHIELD DO IT FOR YOU. SHE JIGS FOR YOU WHILE YOU JIG FOR FISH IN ANATOMICALLY WARMED ATMOSPHERE.

In Summer, may be used as spanker for sailboats.

✓ MOTOREEL FOR OUTBOARDS. THIS REVOLUTIONARY DEVICE ELIMINATES THE REEL FROM THE ROD AND PUTS IT ON THE MOTOR SHAFT—WITH OBVIOUS ADVANTAGES.

As every angler knows, many fish are lost after a minute or two of play. Such loss is avoided by using the MOTOREEL which gaffs fish in a split second. With reel comes new spring gaff which snaps shut when fish hit end of rod.

Also useful when trolled lure snags. Simply turn on MOTOREEL and boat winds self back to snag.

Conservation—and Foreign Aid

Should Congress make an increase in conservation work in this country a condition of a foreign aid program? And should we exchange our goods for natural resources which we need but do not have.

IN A RECENT issue of *The Conservationist*, I expressed my views on the role that conservation must play in our country's future. The main point I tried to make was that if we are to keep feeding our natural resources into our tremendous industrial machine to maintain the production which we need for a high standard of living, and if we are to keep this country strong and secure, we must institute a conservation program so large as to dwarf all efforts to date. It is interesting to note in passing that a number of progressive industrialists took the time to write to me about this article, to express their agreement, and to lament the fact that so few understand the relationship between business and conservation.

A few weeks later, a report was made by the so-called Krug Committee, which had been set up to make a survey of the ability of our resources to stand the tremendous additional drains required to provide substantial foreign aid. As I understand it, the committee held that substantial foreign aid could safely be given—but there was a big "if"; our natural resources can stand it *if* positive and adequate provision is made for their conservation.

In watching the papers closely following the release of this report, I was greatly disappointed, and not a little disheartened, to see that this phase of the committee's report received only passing notice in the news columns, and none in the editorial columns of the nation's press. Perhaps from the strictly current news angle, other aspects of the foreign situation and the problem of foreign aid are of greater interest at the moment; but, in the long run, the question of whether or not the giving of substantial foreign aid is to be accompanied by increasing conservation efforts will, I believe, prove to be more important to this country's welfare. I would go so far as to say that Congress should make an increase in conservation work in this country a *condition* of a foreign aid program.

If we can afford to spend billions of dollars for foreign aid—and if we can afford to make substantial withdrawals from already overtaxed natural resources —it seems only reasonable to expect that we can afford to spend a few cents for each dollar of foreign aid to make sure that every effort is made toward the conservation of what we have left. Specifically we must produce and ship millions of tons of food. With one third of our topsoil gone forever and another third badly damaged, is it too much to expect a reasonable expansion of our soil conservation work designed to build up fertility and arrest erosion, and thus safeguard our own breadbasket? If we are to use up millions of board feet of lumber for crating purposes and for the manufacture and export of items using wood products, is it too much to ask for a real national effort to build up our sadly depleted forest resources? The same type of question can be asked with regard to oil, metals, minerals and a host of other natural resources which will go directly or indirectly into foreign aid.

THE ANSWER seems obvious. Need for a greater conservation effort in this country has existed for a long time. The great and unpredictable demands for foreign aid simply make the meeting of that need a more costly, urgent, and even immediate requirement.

There is another aspect of this problem, which is also important. This country does not have a corner on the natural resources of the world by any means. Any eighth grade student of geography knows that the store of natural resources outside of this country is much greater than it is within. The reason why this country is called upon to give foreign aid is not that we have more resources, but rather that our system of free private enterprise enables us to convert our natural resources into food and other consumer goods, which the people of the world so badly need.

ON this score, I would go so far as to say that the exchange of our goods for natural resources which we need should be made *another condition* for the giving of foreign aid—wherever there is the slightest possibility that the recipients of such aid can make such an exchange, in whole or in part. I am not an economist, but it seems to me that this would serve the further purpose of aiding the economic recovery of distressed nations by giving them something to sell. Such an exchange would also eliminate the "dole" aspect—so destructive of the receiver's self-respect —that might be associated with our program.

These views are in no way to be construed as arguments against the giving of a reasonable and necessary amount of foreign aid, nor as arguments for delaying such aid. Rather, they seem to me to be merely commonsense business-like conditions for such a program, calculated to keep up our national internal strength which stems from our natural resources, and thus enable us to provide continuing, rather than temporary and emergency, world leadership.

—PERRY B. DURYEA, *Commissioner*

Shantytown

by
RAY BENDER
Essex County Agricultural Agent

ALONG in January, when the mercury hits zero and the wind dies down, you will hear strange talk along the shores of Lake Champlain. You'll hear it on the Vermont side, and you'll hear it on ours. You'll hear it in the post office, in the corner store, in the taverns and on the village streets.

"Well, the old lake buttoned up last night."

"Yes, but with the wind in the north I'm afraid she'll break up before dark. Doubt if she'll freeze tight this year; seasons are changing."

"Last year she froze five days earlier than this. I set her down in my diary. Anyway, I'm all set to go."

Set to go ice fishing, of course. It's one of Champlain's major winter sports, and a tidy little business as well. A joint survey made a few years ago by the Conservation Departments of New York and Vermont counted 1,203 fish shanties out on the ice, and huddled in them were 1,941 fishermen. In 8,010 hours they caught 33,243 fish of which 66 per cent were smelt, 30 per cent yellow perch, and the balance walleyed pike, herring, and miscellaneous species.

These dull figures may give some idea of the annual take and the number of people involved, but they don't even suggest the nature of the sport that brings the same old hands back year after year—the days and weeks of preparation, the mounting excitement as the lake begins to freeze over, the endless talk in the bars, and finally the grand launching of the shanties when the lake has at last been declared safe.

These shanties deserve special comment, not only because they are the mainstay of ice fishing on Lake Champlain, but because each one reflects the ingenuity, and even the mood, of its owner. Although there are a lot of refinements dictated by individual taste, all shanties are built according to the same general plan.

They have a floor space of about five by seven feet and are high enough so that a man can stand upright in them. There is a door in one side, and usually one or two windows. So that they can be easily moved around, the shanties are built of a light framework covered with canvas, beaverboard, tin or plywood, and the whole contraption is mounted on runners which are usually shod with band iron. Viewed from the outside, then, a shanty appears to be a hut mounted on a sled. That's just what it is.

Inside, just opposite the door, is a stove with its pipe going out through the roof. At each end of the shanty is a wooden seat, and cut in the floor along side it is a trap door through which the fisherman has access to a hole in the ice. Then there are shelves for matches and smoking equipment, refreshments of various kinds, extra lines and poles, and other knickknacks apparently necessary to the fisherman. There are also nails and hooks on which heavy clothing is hung, for in a shanty properly banked with snow one fishes in comfort.

THIS is just the average shanty. There are a lot of de luxe models which put the average job to shame; some with elaborate kitchen equipment, beds, folding tables and so forth; some extra large; some brilliantly painted. One man who owns 13 shanties—which he makes a business of renting—has recently completed a round, four-hole affair and two rectangular eight-holers, and has in the making a stupendous four-man, eight-hole contraption that will be covered with sheet aluminum.

When the Great Day comes—when the ice is finally declared safe—the shanties start creeping out from the shores. First out are the more adventurous owners, closely followed by others who have often carted or towed their rigs

from many miles away. Villages spring up on the same location year after year.

Besides a shanty, necessary equipment for this sort of fishing consists of an ice chisel to cut the holes, a strainer to clean the chopped ice out of the holes, fish poles and lines, and a license.

The poles are not suitable for fly-casting. They are about 10 inches long, made of any old kind of wood. At one end notches are cut around which to wind the line, and at the opposite end is an extension with a hole cut in it, through which the line is passed. An experienced man will operate two such poles, one in each hand, gripped between the thumb and first finger, but the novice is usually content with one.

A SINKER, about the diameter of a cigarette but shorter, is fastened to the end of the line. The hook commonly favored is a No. 2, on a short length of gut, and for bait a tapered slice—about the size of a minnow and intended to resemble one—is cut from the back of a fish. The object is to keep this bait moving all the time, and the sleight-of-hand by which this is accomplished—in fact, the sleight-of-two hands—is the distinctive art of the experienced ice fisherman. If you should walk cold-turkey into a shanty and see this expert at work, you might think he had escaped from an institution. But the chances are he's catching a lot of smelt.

The number of fish caught depends on a lot of things other than the law. An average catch on a good day would be about 10 pounds of fish, with the smelt running four or five to the pound. But one of my friends last year caught 30 pounds in a single day, and another came home empty-handed. So, as with other fishing, you never know.

The Champlain smelt is a slender, silvery fish, greenish along the back. It has the adipose fin characteristic of the salmonoid fishes, and is closely related to the trouts and the herrings. As a matter of fact there are two races of smelt in Champlain, differing principally in their rate of growth, and although there is some doubt as to their origin the two races have developed naturally in other lakes, and may have done the same in Champlain. It is possible, however, that the larger or native fish were landlocked when the salt water receded from the Champlain Valley about twenty thousand years ago, while the smaller variety represents the progeny of stocked fish.

In any case, specimens of the smaller variety rarely exceed seven inches in length or live more than four years. The larger type sometimes runs to 14 inches, and lives five years. Both races spawn at two years of age, both have moderate-sized scales that rub off easily, and both have large mouths and sharp teeth.

Young smelts feed on plankton. But as they grow older they become bored with this diet and branch out in a can-

nibalistic direction. Probably at least 90 per cent of the winter food of catchable-sized smelt consists of lesser smelts, which explains the effectiveness of the bait mentioned above. It also explains, of course, why you so often catch a fish with another one in its gullet.

There is a mystery concerning the smelt in Champlain; nobody knows where they spawn. Fish of this species usually spawn in streams, but it is generally agreed that in this case they spawn in the lake itself, perhaps on the shoals near the shore. In any event, spawning takes place after the ice breaks up in the spring. During the late winter there seems to be a fairly extensive migration of smelt southward in the lake, and a return migration in the late spring, all of which may be connected with spawning activity. Or it may be an aspect of their feeding habits.

The smelt is still a commercial fish—legally saleable—but present day shipments to city markets don't compare with the three or four-ton loads that used to go out of Port Henry every day. Mr. Lane, superintendent of the Lake Champlain and Mineville Railroad, is said to have been the first to organize this business. He owned about 50 shanties, and at the end of each day he made the rounds in a sleigh, buying up the catch of his fishermen. In those days an average catch would run to about 50 pounds, and would sell at about 20 cents a pound.

Today the price ranges from 35 to 50 cents a pound, but the fisherman is both lucky and good who can average 25 pounds a day. This is probably an indication of an increase in fishing pressure and a consequent decrease in population levels among the smelt—less fish per fisherman.

Caught or bought, the smelt is an excellent pan fish. Dipped in a mixture of corn meal and flour, served with mashed potatoes, home-canned corn, a little sour pickle, bread and butter and coffee, the smelt is very easy to take and very hard to beat.

Plenty of people know this. So, if you should cross the Champlain Bridge below Port Henry this winter and should see—off toward the southern tip of the Champlain Islands—a fair-sized village sitting in the middle of the lake, don't be surprised. The village is there because the smelt are there.

The Latest on Landlocks

AS we went to press the editor asked for a summary of recent developments concerning landlocked salmon, especially a statement of the number of eggs taken for propagation. For reasons more or less understood by every fisherman, the salmon failed to cooperate in full with this request.

A number of these fish are still in the process of ripening eggs as this is written. When all the returns are complete, it is probable that the take of eggs will be about 35,000, which would represent better than a 300 per cent increase over 1946. This is indeed encouraging, as many of the salmon stripped this year were small, yielding only about 1,500 eggs each, and there is every reason to expect a progressive increase in the egg take as the fish grow larger.

Experiments in rearing landlocked salmon breeders (trout breeders have been reared by fish culturists for many years) are now beginning to pay off, and the first eggs obtained this fall were from salmon reared at the Crown Point hatchery. A small number of females matured as four-year-olds and yielded 16,200 eggs, which appear to be of excellent quality. The balance of the eggs was obtained from wild-trapped fish, caught at the Schroon River weir, at Clear Pond, and at the weir on Upper Saranac.

The fall netting showed a most encouraging increase in the numbers of salmon in all of these areas. In addition, growth appears to have been good, as a number of marked fish—planted in 1945 or subsequently—were recovered in excellent condition.

Everything considered, the prospects for landlocked salmon look bright. But please remember that this fine game fish is only on the way up, and is by no means sufficiently abundant in New York to stand much rod pressure as yet. The size limit is 20 inches and only two salmon a day may be kept. It's asking a lot, but try not to think in terms of butter sauce, lemon and parsley when you catch a female salmon. Just turn her loose and tell her about the need for contributing to the 1948 egg collection.—J.R.G.

THE Whitetail IN NEW YORK

As we write, thousands of small license stubs swell our mail. They record the names and addresses of lucky men and women (about one out of eighteen licensees) who bagged deer this season, the weight and the number of antler points of each prize, and the locality where it was taken. Some stubs have been blurred by snow or rain. Behind each is a story of a trip, a hunt, an adventure that may get bigger and better with each telling. This is the pleasant and profitable side of having deer in every non-metropolitan county—and of having over a quarter-million deer hunters.

At the same time two special committees, one from the sportsmen's Conservation Council and one from the Farm Bureau Federation, are working jointly, with advisory help from this Department, on ways and means of dealing with the vexatious problems arising from deer damage to farm crops, and the overbrowsing of deer range. When the Legislature convenes, these committees hope to have constructive legislation ready for action.

Present day deer problems can best be understood if one knows something of the historical process which created them. The complete history would entail chapters on agriculture, lumbering, the forest preserves, legislation, the rise of hunting as a sport and many other related factors—but the high spots, the significant points, can be sketched.

In pioneer days deer were part of the natural resources of the country, to be exploited as needed for food, clothing and other uses. Early settlement followed the major valleys which offered the most fertile soils. These areas also represented the best deer range. As settlement expanded during the Nineteenth Century, with few laws restricting hunting and less enforcement, deer were virtually eliminated from New York State outside the Adirondack forest. But by this time, the pioneer needs which had been supplied by deer products were being satisfied from other sources. Furthermore, few people had the leisure to hunt deer for sport, although where they still occurred the animals were shot by local residents as there was opportunity. In the Adirondacks they were hunted extensively for the market. Venison was a major item on lumber camp menus. Throughout this period the presence, or absence, of deer was accepted as it happened to occur, with little or no thought of doing anything about it. Thus no deer problem, in the sense it is being considered in this article, existed.

The situation began to change during the latter half of the 1800s. Logging operations created a more favorable environment for deer in the wilderness sections of the State, especially the Adirondacks, and resort hotels became popular in the forest regions. The former increased the distribution and abundance of deer; the latter fostered an increasing acquaintance with these sections on the part of vacationists and along with it an interest in deer hunting for sport. As hunting of this kind grew in popularity, so did the demand for more deer. Yet market hunting still flourished and, together with other over liberal practices, took an undue toll. In spite of the range improvement brought about by lumbering, the deer population did not become abundant.

A need for conservation measures was recognized. The first bag limit (three deer per person per season) was established in 1886 and in the same year "crusting" (taking deer in winter when bogged down in snow) in deer yards was prohibited. In 1895 the open season was shortened to August 15-November 15. "Hounding" was forbidden in 1896. "Jacking" and killing deer in the water were outlawed the following year. By 1908 an open season for deer hunting was provided (outside Long Island) only in the Adirondack region and in Dutchess and portions of Sullivan and Orange counties. Finally, the "buck law" was passed in 1912 and in 1920 the season in the Adirondack region was further shortened to one month. Meantime, additional territory in the Catskill region had been opened to two weeks of hunting or less.

Such was the situation at the close of the first quarter of the present century. Deer had increased but the problem was still one of encouraging greater abundance.

AFTER World War I, economic changes had resulted in the abandonment of large areas of sub-marginal farmland (see *The Conservationist* for October-November 1947). Such land rapidly became highly productive range for deer which soon spread into it. Once a nucleus of breeding stock was established, deer abundance rose by leaps and bounds. An important factor in the rate of this increase—in its initial phases at least—was the fact that deer had been absent from the region so long that there was little tradition of using venison as a staple in the family larder. The territory primarily involved in this expansion comprised the central and western parts of the State, although smaller areas of similar nature occur in other localities. Beginning with Schoharie County in 1931* and Otsego in 1936, the area open to deer hunting has been extended until the sport now may be enjoyed in every county except Montgomery and Westchester (outside greater New York and Long Island). Yet the number of deer hunters has increased from about 75,000 in 1930 to nearly 275,000 in 1946. Deer abundance is still far short of the demand.

But in the Southern Tier and adjoining counties a different aspect of

*For one year (1928) an open season had been held in every county in the State.

PART TWO

This is the second of two articles on our most important game species—the whitetailed deer.

In the last issue we discussed the habits and characteristics of the animal itself. This time we try to provide background material for discussions concerning the many problems of practical deer management.

the deer problem has arisen. Here, woodlands and abandoned farms are interspersed with productive agricultural land. While the former constitute the mainstay of the deer population, these animals, like other wildlife species, are quick to take advantage of the opportunities afforded to feed on highly palatable crops. It was natural that people should like to have deer around and to have them increase. Over most of this region few could remember when deer had been present before. But as they increased their damage to crops became more and more serious. Farmers, particularly orchardists, sought relief. Experiments with repellents did not provide a remedy. Gradually the realization crystallized that, in this region, continued increase in the deer population, however much desired by the sportsman, could not be reconciled with the basic agricultural economy.

It also became clear to biologists, tipped off by a preview in Pennsylvania, that unchecked increase would result in the deer lowering the carrying capacity of their woodland range. It was evident, too, that the hunting of bucks only did not sufficiently limit such increase. Reduction of the number of does offered the only effective solution. Accordingly, provision was made in the Laws of 1938 authorizing the Conservation Commissioner to permit limiting hunting for antlerless deer to meet situations of this kind. Such an open season was declared in Steuben County in 1941 and a more general one in 1943. Following this the Legislature enacted an open season throughout most of the region in 1944 for taking one deer of either sex. These measures had the desired effect of appreciably reducing deer abundance in this region—but not for long. The herd recovered rapidly and has again reached a level where another reduction is called for.

Thus the deer problem has changed markedly in the past twenty years and in doing so has become more complex. Now, not only is there the problem in the forest areas of producing as great an abundance as the range can support, but there is also the problem in a large part of the State of limiting deer abundance to levels compatible with agriculture and other interests on range that otherwise could produce greater numbers.

The foregoing is a brief sketch of the development of the deer problems we are faced with today. Following is a discussion of the situation in the major regions of the State and the policy called for with respect to open seasons.

Considering the Adirondacks first, the problem there is to produce and maintain as many deer as the range can support. Over much of the interior of the region, however, deer have already reached this level in terms of the present condition of the range. The species has become more widely distributed and more abundant during the last two decades than ever before in recent history. Contrary to popular belief, the idea that the great northern forest was a deer hunter's paradise in primitive times is a fallacy. When Henry Hudson sailed his Half Moon up the river which now bears his name, deer were most numerous in the fertile lowlands of the State, such as the valleys of the Hudson, Mohawk, Delaware, Susquehanna and Allegheny, and in the Erie-Ontario-St. Lawrence Plain. Elsewhere, in the extensive stands of "big timber," they were less plentiful.

IN THE ADIRONDACKS this was especially true. Originally, wherever deer found conditions somewhat favorable, the wolves and panthers kept their numbers low. The major reason for the effectiveness of these predators in this region seems to have been the deep snow which piled up each winter and restricted the ability of the deer to travel. Their elimination, together with the opening up of the "big woods" by the lumberman and a growing favorable public sentiment, enabled an appreciable deer herd to become established. Nevertheless, the region was, and still is, comparatively poor deer range.

Research data gathered during recent years are beginning to reveal some of the reasons why this is so. In the first place, most of the Adirondack region is characterized by soil low in fertility and in many minerals, so that food plants growing there probably are of low nutritive value. Secondly, the growing season is short and the winter climate severe.

Coupled with this is the fact that, whereas early lumbering operations were beneficial to the quality of the range, their ultimate expansion was not. Early lumbering mainly took prime saw timber and thus increased browse supplies while leaving an abundance of shelter. As time went on, however, a lowering of stumpage limits took place climaxed by the very low sizes accepted for pulp during recent years. Cut-over areas markedly deficient in shelter became extensive. This trend, together with fire and man's occupation of valley lands, greatly restricted suitable wintering grounds.

Because of these conditions deer are forced to congregate for several months each year in "yards" which are only a small proportion of the total range of the region. In many of these situations both the quantity and variety of available browse have been depleted by overbrowsing.

These influences are reflected in the productivity of the deer population. (See article by E. L. Cheatum in *The Conservationist* for April-May 1947.) Outstanding is the fact that the great majority of fawns produced are singletons, whereas on good range the majority are twins. Also, data indicate that more than 20 per cent of the does in this section do not breed successfully each year—not from lack of bucks, but because the does are below par physiologically as a result of poor nutrition. This all adds up to a relatively low rate of reproduction.

In addition, mortality, especially winter-kill, is heavy among Adirondack deer, although it varies considerably from year to year. But even in average seasons many deer die, mostly fawns. Beyond this, however, winters of unusual severity occur every few years. On such occasions losses mount still higher and, instead of being made up primarily of fawns, are composed of about equal numbers of fawns and adults. Furthermore, the latter are largely does. This appears to be Nature's final "leveler" of deer abundance in this region, particularly in the interior.

It has been recognized for some time that the basic cause of such mortality is malnutrition. In many of the larger yarding grounds desirable browse has been seriously depleted in the area to which deer are confined during severe winters.* On the other hand, evidence (although circumstantial rather than experimentally proven) has been accumulating that, with respect to the region as a whole, the nutritive quality of the browse growing there may be a major factor, and perhaps a more important one than the amount of browse present and the competition for it. In other words, it seems likely that, in severe weather, the food value of the browse present (even though desirable species are available) is often not sufficient to compensate for the energy loss suffered by the animals, especially fawns, in combatting cold and deep snow. To the extent that this is true, winter mortality in this region will occur regardless of the density of the

deer population. Moreover, it means that winter mortality is not necessarily a manifestation of range depletion.

Recent development of a technique for judging the age of deer by examining their teeth (C. W. Severinghaus,

leader PR Project 28-R, unpublished ms.) has shed further light on this matter. During the past ten years the jaws of winter-killed deer have been systematically collected by field men. Analysis of this material shows that the adults found were mostly old does. But of especial significance is the fact that roughly three-quarters of the fawns recorded were born a month or more later than normal. Fawns born at the usual time have acquired their permanent incisors (front teeth) early in the winter, whereas late-born fawns are in the process of replacing their baby teeth in mid-winter. This means that fawns of the latter type are under an extra handicap in feeding. Correlated with this may be cited the fact that, according to data gathered regarding breeding dates, about 15 per cent of the does in the Adirondacks are not bred until a month or more later than average.

The effect of this combination of factors has been to curtail continued increase among deer in the central portions of the Adirondacks. In the more settled sections, however, a different situation exists. There, illegal hunting throughout the year is primarily responsible for a lower abundance than what the range would otherwise support. This has been true for many years and is still a factor although an intensified campaign is currently under way to combat it. The seriousness of the situation is reflected by the fact that an effort was made in the last Legislature to provide heavier penalties for violations, although it failed of passage. Yet the need for more stringent measures remains and the matter will probably come up again at the coming session.

From the foregoing it is seen that a paramount limitation to greater deer abundance in the Adirondack region is their low reproductive rate coupled with high mortality resulting from a large winter-kill in some sections, and from heavy illegal shooting in others. Nevertheless, their numbers justify the hunting of bucks under present regulations. Data regarding the age composition of the Adirondack deer herd, obtained at checking stations operated by the Department during the hunting season for the past several years, have indicated a satisfactory proportion of yearlings each fall. A significant finding in this connection, derived from the examination of antlerless deer taken in 1943, is the fact that about half of the yearling bucks (1½ years) and about 15 per cent of the 2½-year-olds do not have legal antlers. Thus, many of the supposed does reported seen by hunters are, in reality, bucks.

The possibility that, in view of the substantial winter losses suffered every few years, the situation would be improved by permitting the taking of antlerless deer does not appear sound with respect to the region as a whole. It has been shown that the majority of these losses are late fawns and over-age does. It has also been shown that, in the main, they result from factors other than range depletion and direct food shortage. In other words, they are to a large degree inevitable—depending on the severity of the winter. Hunting could not be focussed on the particular individuals destined to die, but would have an equal chance of eliminating animals destined to survive. Therefore, in the interest of providing for the most rapid comeback possible following recurrent years of high mortality, it is best to hunt antlered deer only and let Nature cull the others.

On the other hand, there are limited areas in the interior of the region where population reduction through taking antlerless deer from time to time might be sound management, although administrative difficulties would be involved. If these areas can be satisfactorily delineated and means of handling them separately worked out, the taking of antlerless deer there might be recommended at some future time. But a general open season of this kind throughout the region would affect such areas very little, while having its greatest effect in the more accessible sections where it would be least appropriate.

IN THE CATSKILL REGION the problem is also to maintain as many deer as the range will support. Here, however, there is a greater chance of conflict with agriculture than in the Adirondacks. One reason for this is that, as considered, the region embraces not only the Catskill Mountain area proper but also the counties east of the Hudson River and south of Washington County. Moreover, the region as a whole is interspersed to a greater extent with productive agricultural areas. Another factor is that deer productivity is higher.

As in the Adirondacks, the virgin forests supported a comparatively low number of deer, except in the more fertile valleys where openings were frequent. Although their abundance probably increased as the forests were opened up, deer were reduced almost to the

vanishing point in this region during the latter part of the past century. Since that time, however, the deer population has increased gradually.

Basically the range is of higher quality than that in the northern part of the State. The soils are more diversified and more fertile, supporting a wider variety of browse. The growing season in general is markedly longer and winters are less severe. As a result the reproductive rate among deer in this territory is high and natural mortality relatively low. Only in unusually hard winters do losses from malnutrition occur, and even then they are usually localized.

Research findings have revealed some of the facts behind this situation. In contrast to the Adirondacks, the majority of the fawns produced are twins, and triplets are frequent. Along with this, over 90 per cent of the does are bred successfully each year. Thus the annual increment of young, per unit of breeding stock, is high.

In spite of this, however, the deer population of the region has never reached a high density. In the central part this is due, to a large extent, to the fact that the high elevations and steep slopes of the mountains are still undesirable habitat. Elsewhere the reason seems to lie mainly in illegal year-around hunting which holds the number of does in check. Added to this is the fact that in winters of deep snow, dog predation becomes appreciable.

That illegal hunting must be responsible for the excessive drain on the doe population is indicated by the following facts. Virtually all the does present are successfully bred each year. Their reproductive rate is comparable to that of does in the Southern Tier region where the population does increase rapidly. Winter losses are too low to account for the difference. Furthermore, areas within the region where hunting is prohibited, such as Bear Mountain State Park, have become over populated.

With respect to hunting, the taking of bucks under present regulations appears to be a sound policy. The popu-

lation seems adequate despite heavy hunting pressure although, of course, more hunters would be successful if deer were more abundant. Data regarding the age composition of the Catskill deer herd have shown a high rate of turnover among bucks. Roughly 50 per cent of those examined during the hunting season have been yearlings and about 95 per cent 3½ years old or less. That the proportion of yearlings and the annual take are both high indicates satisfactory breeding. On the other hand, the fact that serious crop damage has developed only in a few local situations indicates that there is no need at present to seek a general reduction of the herd. In this connection, however, it may be mentioned that Long Island, although not a part of the Catskill region, already has an appreciable problem of this kind.

Nevertheless, where local crop damage problems occur they cannot be ignored. The present policy of issuing permits to landowners to take offending animals affords a solution in many in-

'47 Freak: taken by C. Pulsifer in Essex County

stances. Experiments with a type of electric fence (originally developed in Vermont) give promise that it can be recommended for orchards, nurseries and truck crops where such installations might be economically feasible. Beyond this, if serious crop damage should become more widespread in the future, herd reduction through the taking of antlerless deer would be the only cure.

IN THE SOUTHERN TIER, there is a problem very different from that existing elsewhere. Here is the best deer range in the State. Likewise farmland is also superior over the region as a whole. Although it was not until the early 1930's that deer began to reoccupy the territory after their elimination following the early period of settlement, they have increased very rapidly since then. Unlike the other two regions, the problem here has become one of too many deer—not too many deer for immediate sporting purposes, but too many deer to live in harmony with agricultural interests and, in the wilder sections, too many deer for the range to support without overbrowsing.

The land is rolling and characterized by fertile soils providing an abundance of high quality browse. Although honeycombed throughout with productive farmland, there are extensive wooded uplands in the Allegheny foothills. But as one approaches Lake Ontario, flat extensive croplands predominate. The winter climate ranges from moderate in the southern highlands to mild in the Lake Plain section. Mortality from malnutrition is virtually unknown.

Data regarding reproductive capacity indicate that the birth rate among deer in the Southern Tier is similar to that in the Catskills. An interesting feature is the fact that, among specimens from both regions combined, about 36 per cent of the doe fawns had bred successfully when only six or seven months old. Apparently the survival of does is relatively high in view of the productivity observed, which otherwise should not exceed that of the Catskill region.

As a result of this combination of a very favorable environment and a low rate of mortality among adult does, the deer population of the region has multiplied rapidly. Not only have the animals become abundant in the sections affording semi-forest type range, but they have become numerous in more extensively cultivated localities. Even such counties as Wayne, Ontario, Monroe and Orleans now have deer. Nevertheless, the range would permit still greater abundance, at least until its carrying capacity was lowered by overbrowsing. On the other hand, the damage problem has already become acute.

Where deer live in a situation in which farmlands constitute part of their habitat it is only natural that they should take advantage of the opportunity to feed on the crops available. Orchards and truck gardens suffer most but grain fields also are often damaged. As deer abundance rises, so does the seriousness of the damage. When the upward trend in abundance approaches the point where the resultant damage can no longer be tolerated, then the herd must be substantially reduced. That is the case in much of the Southern Tier today.

But this is only part of the problem. While sportsmen would welcome an almost unlimited number of deer for hunting purposes, they must recognize that, unless checked, deer will soon reach a level of abundance where they will cause deterioration of their woodland range by overbrowsing. In territory such as the Southern Tier such a trend could easily deplete the range for small game as well as deer. For evidence of this one has only to consider what has happened in Pennsylvania and southern Michigan. It is thus essential to the interest of the hunter, too, that controls be exercised over the increase of deer in this region.

Since 1938 more and more of this territory has been opened to buck hunting. The hunting pressure has been high and many deer have been taken each fall. Records of the proportion of age classes in the kill indicate a similar rate of turn-over to that found in the Catskills. It may be concluded that continued hunting of antlered deer is sound management.

But buck hunting alone is not sufficient in this region. The only effective and practical way in which to keep the population within tolerable limits is to provide open seasons from time to time for taking antlerless deer. Such a season, on a limited basis, was declared in 1943 and was followed by another in 1944 when the number of licenses was not limited. The second of these, especially, was successful in reducing the deer population. But it didn't stay reduced. Deer abundance immediately began to climb again and has now recovered to the point where

'47 Freak: taken by R. Damuth in Lewis County

reduction is again called for, although the situation is more serious in some sections than in others. Other reductions will be necessary in the future. Therefore, some kind of an antlerless season should be provided for the fall of '48, affecting a substantial part of the Southern Tier and western New York. In view of the success of the one in 1944—when a license holder could take one deer of either sex—it is believed that similar regulations would be best.

With respect to the conflict of interest between recreation and agriculture regarding deer, a highly encouraging development has taken place during the last year. As was mentioned at the beginning of this article, two committees, one representing the farmers and the other the sportsmen, have been holding a series of conferences to work out a mutually agreeable program.

Because of the varied nature of New York State its deer problem is complex. Nevertheless, it is becoming progressively better understood and those concerned are learning to compromise their differences. The future looks brighter.

—ROBERT W. DARROW

OUR STATE has a lot to lose in a forest fire. Of our 30 million acres, 22 million could burn.

The danger to this acreage was greater last October than it has been for 25 years. For almost the entire month conditions were ideal for forest fires. Early frosts shrivelled and dried vegetation; temperatures over the State averaged about seven degrees above normal for the month, and rainfall was less than 20 per cent of normal. But above all, sensationally low humidities—repeated day after day—made forests, fields, and brushlots highly inflammable.

Matches were not needed to start a fire. It was found that a glass jug full of water, left in the woods by a lumberjack, could focus the sun's rays on some dry leaves and set them ablaze in short order.

And not only the leaves and surface growth would burn. The ground was so dry that conditions were perfect for the most destructive, though least spectacular, sort of blaze—the smouldering, deep-burning ground fire, which destroys the organic material in the soil and so prevents new growth for decades to come.

Considering the conditions—and in no state were they worse—New York survived the ordeal surprisingly well. We had a total of 474 fires which averaged 41.7 acres each. Most were small, but a few big ones like the Ellenville fire brought up the average. They destroyed 4,274 acres of merchantable timber, 4,955 acres of non-merchantable timber, 9,558 acres of brushland, and 977 acres of grass and waste land; a total of 19,764 acres, involving a cash loss of $124,805. No lives were lost and no houses were destroyed.

Obviously, it could have been a lot worse. In Maine, for example, 13 people were killed, 1,056 houses were burned, 100,000 acres of woodland gutted, and damage ran into the multi-millions. Compared to this holocaust, we escaped with only minor bruises.

One reason for this was the prompt closing of the woods by the Governor's Proclamation, the idea being, of course, that an ounce of prevention is worth a pound of cure. Only twice before had the entire State been closed; once in May, 1932, and again in May, 1941.

A second reason why the damage was relatively small was a co-ordinated system of fire prevention, detection and fighting—a system developed and perfected over a period of many years and designed to meet just such an emergency. Our fire control setup has been described previously in this magazine, but the account below of the Ellenville fire may give you an idea of how it operates in actuality.

A third, and extremely important factor in keeping the fires in check, was public cooperation. There were 125 persons arrested for violating the Governor's Proclamation, but the majority of our citizens really pitched in. Led by Department personnel, 8,000 men fought fires for a total of 31,000 man-days. There was never a shortage of volunteers at any fire although, as at Ellenville, there were sometimes too few trained men to lead them. Newspapers and radio stations broadcast appeals for help as it was needed, and the response was immediate. In short, the seriousness of the situation was generally understood by the public—a fact which may well have been decisive in pulling us through.

Still, we had bad fires. The worst, and the hardest fought, was the Ellenville fire—really three fires—which burned across the line between Ulster and Sullivan counties. Five Rangers, 12 Firewardens, and 1,000 men fought it for six days. Arthur Walsh was the District Ranger in charge of this one. His report follows:

"At 6 a.m. October 21, one small fire climbed into long pants and left home. This new fire, we thought, was a real one. A rugged night of chopping lines through laurel and rhododendron thickets brought things under control just before daybreak the following day, and we all had the impression that the job was done.

"This was a childish mistake. At a point 15 miles to the north, high up on the crest of the Shawangunks near Lake Maratanza, another fire started in dried ferns and scrub pine. From the south tip of the range, fire roared through an ideal fuel riding a northwest wind. Hours of bitter effort by Rangers and men already tired forced lines into the matted scrub. There was a promise of partial control, then near disaster, for out of the murk came two new fires, one on the east from Cragsmoor, and another on the west from Ellenville. Started almost simultaneously, they outflanked our lines and threatened to join in one great blaze.

"WE had to withdraw. Distances were now so great that maintaining contact between crews was difficult, and at this point our planes and radios paid real dividends. Their use made it possible to locate natural barriers, trails, and water, as well as the position of the fire.

"Through October 23 and 24 our entire available force engaged the fire in a knockdown-dragout fight which forced the east line of the Ellenville fire into an area already burned. But on the other flank the original Maratanza fire joined up with the one from Cragsmoor and started moving down into Walker Valley, and up through the hardwoods toward the crest of the Shawangunks.

"Good planning and hard work saved the houses in Walker Valley, but the fire on the mountain got into the tops, and the east finger crowned in the pines along the shore of Lake Awosting. Still, we had the situation pretty well under control by the night of the 24th. Then two things happened; the wind shifted, and a new fire started on the Lake Mohonk side of the Minnewaska Trail. We reorganized our lines and did the best we could, but by dawn both Rangers and volunteers were dropping on the lines from lack of sleep.

"The sun came up with midsummer heat and the humidity receded to the vanishing point. The fire blew up. At about this time the Goose (Department's plane) came through the smoke and landed on Lake Awosting with two portable radios. We set one of them up on the crest of the Shawangunks and made contact with the Waco, which was circling the fire. One of our crews was pretty well trapped by flames, but the plane's pilot spotted them and radioed bearings, and everyone was withdrawn to safety.

"We got our first break on the 25th. A heavy dew formed. On the 26th all of the fires were definitely under control.

"On the 27th it rained hard. Good old District 13."

Smart Guy

A new kind of wiseacre is fattening on public apathy.

"THEY call me a smart guy. I guess I am. A new kind of smart guy. My specialty is breaking the fish and game laws and getting away with it. There's more of my kind of people every day, so I guess I'm a smart guy all right. And it's a laugh.

"They try to check up on us but hell, there aren't many game protectors. When the state police and sheriffs' deputies pitch in along with the game protectors, they're a tough bunch, sure, but still small. Maybe they do catch a lot of us each month. So what? My kind goes right on growing in number despite the long hours and top speed these Johnnies work at.

"I'll let you in on the secret of it all and tell you why I don't think I'm a lawbreaker. *Public apathy!* Ever hear of it? You feel funny at first but when you find that other people don't seem to give a damn, you get to thinking you're doing no wrong and you're just being wise. It's not the kind of apathy that brings on juvenile delinquency or makes a community backslide in its civic duties; it's a new and special kind.

"I break the law and get away with it mostly because nobody else wants to be bothered with checking up on me. They'd rather look the other way. And if I get caught, it's usually easy to settle. They aren't so tough. There are no real teeth in the laws. You get in front of a hard judge now and then but that's the chance you have to take.

"Who cares if I break the law? I can still go to my fish and game club without worrying about being thrown out just because my name shows up on the posted list of violators. Too many of us on these lists, I guess. We're getting so we outnumber the 'good' guys in the club.

"It doesn't cost much to belong to the club, and it's a damn good cover-up. Just pay the small dues, make a lot of noise, act important, sit back and do nothing about the club's program. Let the other fellows do the hard work. It's just like taking candy from babies, going out later and cashing in on the fish and game.

"I used to be skittish about that kind of newspaper publicity but not now. There are more of us now than a lot of papers seem to want to handle. Most of them used to haul us over the coals, but now only a few give a damn. And it's a laugh, I tell you, how we can brazen it out when some of the fellows try to open up on us. They don't get much support—most of the guys look the other way. Some day they'll get smart and do like we're doing. We get away with it, so why not?

"Some of us don't even bother to buy a license. If we do, why not loan it out? If I'm not using it, somebody else might just as well. It did cost money. A lot of us carry loaded guns in our cars all the time. The law says we can't but it's our necks and our cars. We haven't been hurt much yet, and it's easier hunting from a highway. Why walk all day when you can ride along until you see something and then plaster it from the car or the road?

"Imagine buying a license anyhow. For what? To pay to propagate fish and game, for hatcheries, research, game farms, soil improvement, stream development? That's the bunk for the wiseacres who call themselves conservationists. Yeah, conservationists, all right—saving it for us to go out and grab off. How can they be so dumb? Well, that's the way with the world—some dopes toil and sweat while the smart guy comes along and gets the gravy. Like I said, taking candy from babies.

"And speaking of babies, my youngster is getting sort of cute, too. We get quite a bag of stuff when we go out together. Often helps me get the limit. Junior goes out himself lots of times and comes home loaded. Good shot, that kid. Tell him he shouldn't? Hell, if he doesn't get it, some other kid will.

"Get it first, I tell him, to hell with those other fellows. The idea is catching on, too, not only with Junior, but I mean with other hunters and fishermen.

"Seasons and bag limits! They're a laugh. Get all you can while the getting's good. Who knows where we or the fish and game will be tomorrow? Posters and game refuges! Utterly selfish idea. Trying to keep it away from us. Well, you can always sneak in and out again, if you're cute.

"The nerve of those landowners thinking they can hog all the fish and game to themselves, anyway. With all that room, let them plant more. If we bust a fence let their kids chase the livestock, they've got lots of time. Climb fences? You might get hurt. Look at all the hunting accidents that happen that way.

"WHAT'S all this fuss about farmer-sportsman relationship? I support the places in town the farmer goes to and pay for his good roads and his kids' school. Why should I ask to hunt and fish on his place? I don't owe him nothing.

"All these fancy regulations they dream up! They just want to take your dough with more permits. Too restricting. No liberty left any more. Just as though this stuff belonged to everybody and needed regulating. Maybe. But I'm getting mine, regardless.

"My time is money and money buys my equipment. So they want to tell me how and when I can use it! I like to get there ahead of the other guy and stay after he's gone. No cramping my style. I get more that way.

"Let me tell you the fun you can get out of jacklighting a deer—.

"What's that Nell? Junior's been out with my gun? Well, what of it? Sure, he's too young to own a gun and can't get a license until he's older. So what; he wanted to try a bigger gun. Shooting at ducks, was he? He didn't get caught. Bert saw him? Well, Bert wouldn't turn him in. Everybody knows Bert's a right guy. Bert wouldn't turn me in either. That would be informing. Nobody wants to be tabbed a squealer or a snitcher. They're not popular, see?

"They may get over it some day. They may—. But right now, they'd rather look the other way. It's easier for them, and God knows it's easier for us.

"Gosh, isn't it a howl?"

—ROLAND B. MILLER

Lake Trout

ST. PAUL NEW YORK'S FISH HATCHERIES PRODUCE [illegible] ...ion rainbow trout, from wild fish ...ed by the process. ...ABOVE—Anglers inspecting bags of Siscowet Lake ... CENTER—Net entanglement in laketrout. BOTTOM—... a ...d growth data (BOTTOM RIGHT) for a research ...

t in New York

Salmon trout, gray trout, togue, mackinaw—by whatever name, the lake trout is one of our most valuable game and commercial fishes. He likes it cold and deep and lonely, but is not averse to a helping hand

AS WITH most other species, including *Homo sapiens*, successful management of the lake trout is furthered by giving him an attractive home and an easy living. Home to the lake trout includes no hearthstone; he likes to be cold and will seek the depths to retain his frigid comfort. Just as few men care to dispute territory with the Eskimos, only a few fish compete with lake trout on even terms. Nevertheless, the months of October through May (three-quarters of the year) afford plenty of cold water in the shallows. Then the lake trout looks for the more abundant forage of the shallows and too often fails to find it because bass and other warm-water foragers have swept it bare.

Like many other popular game fish, the lake trout is known by various names according to the locality and background of the fisherman. Perhaps most misleading is "salmon trout", used extensively by early fish culturists and even yet by Adirondack fishermen; other common names are gray trout, togue and mackinaw trout. By whatever name, this trout deserves a place near the top among our native game species.

The lake trout has a wide distribution in America from Labrador and Maine to within the Arctic Circle in Alaska; it is outstanding in the fisheries of the Northern States and adjoining areas of Canada. Here the large, deep, rocky lakes preferred by lake trout are scattered in generous profusion.

Among our trout, the lake trout is perhaps most dependent upon a uniformly cold-water environment, a requirement which limits it to lakes deep enough to maintain an extensive layer of cold, well aerated water throughout the summer. These characteristics of the lake trout environment explain, in part, the fact that yields from such lakes are low per unit of area, for the conditions that are favorable for lake trout also cause low basic productivity. They also explain some apparent paradoxes with respect to comparative yields.

These are illustrated by the recorded catches of commercial fishermen in lakes Erie and Ontario. Of these two lakes, Erie is shallower and much more productive of fish *generally* than Lake Ontario. The deep, cold water of Lake Ontario favors lake trout, however, and this lake has consistently produced more of this species than Lake Erie. Since 1900 Lake Erie has seldom produced more than 2,500 pounds of trout in any year, while Ontario has commonly yielded 12,000 pounds and as high as 60,000 pounds in 1946.

FACTORS other than low productivity contribute to the fact that, on the average, lake trout fishing is slow. Lake trout are comparatively big fish: in the better inland lakes, trout from 10 to 20 pounds are common and, in the Great Lakes, extreme weights up to 125 pounds have been reported by various authors. Naturally, a population of large fish will contain fewer individuals than a like weight of a smaller species. Other things being equal, the fewer the fish the fewer the bites. Then too, the necessity to fish in deep water is an important physical handicap tending to limit the amount of lake trout fishing done as well as, to a lesser extent, limiting the success per hour of fishing effort.

Angling for lake trout is unfortunately conditioned by the necessity of using enough line and weight to follow the fish as they migrate into the deep, cold water. Early season fishing, to the end of May and sometimes into June, is usually done in relatively shallow water but later, through the summer, productive fishing must be close to the bottom and deep—usually deeper than 40 feet. Trolling, except early, must be done with heavy gear and, whether weighted by lead or by use of a metal line, such tackle limits the fighting qualities of any trout hooked.

As the water cools off in the fall, lake trout again enter the shallows, the adults primarily for spawning which takes place over a period, varying in different lakes, from early October to late November. Unlike other trout species, lake trout construct no nest or "redd" but scatter their eggs over a rough, rubble bottom. Normally many of the eggs are consumed by suckers, bullheads and other species, but many lodge out of reach among or under the rubble. Here they develop slowly during the winter and hatch in March or April.

LOSSES of eggs and young, combined with limited favorable spawning areas, are believed to cause the need for stocking in some lakes in order to maintain capacity populations. Angling cuts heavily into the older year-classes in some lakes, but probably seldom reduces spawning populations below the level necessary for capacity egg-production. Introductions of non-native species, such as bass, perch and walleyed pike have caused unfavorable conditions for survival and growth of lake trout in many situations, however, and stocking can only partially compensate for such handicaps.

Hatchery production of lake trout has been extensively carried on since 1876, but there is still much room for improvement in cultural methods as well as in planting techniques. Field investigations, carried on primarily at Seneca and Raquette lakes during spawn-taking operations, are accumulating critical information on these and other management problems. These include extent of migration with relation to spawning areas, growth rates, and extent of fishing pressure, as well as factors relating to efficient spawn-taking and the possible importance of racial characteristics.

In his own territory the lake trout is a tough customer and, with reasonable care, maintains a productive population. He continues to thrive unless the struggle with competitors like walleyed pike, bass and perch becomes too strenuous. To him, the angler is a lesser evil.

—C. W. GREENE
Senior Aquatic Biologist

1/6th of the State

Part Two

SOME years ago I came on a little poem in the Atlantic Monthly. I have forgotten the author and the poem—all except three lines.

"Sometimes a house will die as men will die
And then the pulses of its being fail
And cold upon the hearth its ashes lie"

Now it may well be that the death of a house is hardly less melancholy than the death of a man. That a house in which men and women once lived and loved, and where children were brought up, and where were centered all the multiform activities of the farm—that a house such as that should become hollow and empty, and the ashes cold on the hearth, while the autumn rains seep through the rotting roof and the snows of winter drift through the broken panes—that I say is a tragedy.

Unfortunately, it is a tragedy which during the last half century has been ten thousand times repeated within the Empire State. A house deserves a worthier end. Far better that it should go up in a wild flare of flame at midnight, reddening the low clouds for a brief quarter-hour and so making its final exit with a grand gesture of dignity.

The abandoned farm is an old, old phenomenon in some regions of our country. New England is pre-eminently the classic ground of rural decay, and there are plenty of Yankee townships which today have only a fraction of the population found at the first Federal census in 1790. There are considerable regions in Massachusetts, Rhode Island and Connecticut which had attained their agricultural zenith even before the day when the farmer came in from the field, picked up his flintlock and went down to Boston to help stand off the Britishers at Bunker Hill.

In southwestern Vermont there is a township with the splendidly mouth-filling old English name of Glastenbury, which, after a good deal more than a century of existence, has ceased to exist as a political unit. The very good reason is that no longer are there residents enough to go through the motions of operating the legal machinery of a Town Meeting, or of choosing one of their number to sit as their representative in the Vermont General Assembly at Montpelier. I think that nowhere in New York State is there community decay even remotely approaching this, but there is no telling what the future will bring.

The fundamental reason why farm abandonment in New England began so early and went so far is because much land was cleared and made into so-called farms that by no stretch of truth or imagination could sustain a decent family home. Furthermore, families increased astoundingly. The Puritans seem to have been a strangely virile and prolific people, and their Yankee descendants of a century and a half ago exhibited what has been called the highest "effective" or "net" birthrate in history. A student of New England population has pointed out that there was a period in the Eighteenth Century when the inhabitants of those states, without immigration, doubled their number in 13 years.

At any rate, by the period of the Revolution much of New England was agriculturally overcrowded. Population pressure led to clearing and farming not only the narrow valleys but the boulder-strewn slopes and the windswept hill tops. We in New York never knew anything quite like that. The Hudson River Valley counties were settled very early and by the time of the Revolutionary War were well populated, but at that time everything west of Rome and Chenango Forks and Unadilla—i.e., west of the Fort Stanwix Treaty Line—was literally a howling wilderness where the writs of the Iroquois were still in force. Sullivan's Expedition included a large number of Massachusetts men and when they returned home they brought back great tales of the beauty and fertility of the Finger Lake region and of the Genesee Country through which they had marched. After the Revolution, the Fort Stanwix Treaty Line no longer held, and very promptly the New Englander and his family were on the march, swarming across the Hudson and on into the better lands of "The Purchase".

So it came to pass that Western New York, instead of being settled by the Dutch and German overflow from the Hudson River Country, was conquered by the Yankee. Nor did this torrent of New England emigration spend its force in New York. It pressed on into the Western Reserve of Ohio and it left its mark on every later state as far as the Pacific Ocean. Virginia may have been the "Mother of Presidents", but Connecticut was the Mother of States. Joseph Trumbell in his History of Connecticut boasts that there was a day when the Congress of the United States in Washington lacked only five names of having a majority of its members born in the Nutmeg State.

SO it was that many New England towns became agriculturally depopulated—partly because the farm boys went seeking their fortunes on newer and better land in other states—partly because they found a place for themselves close to home in the industrial development of the region which was then the work shop of America. Thus abandoned farms and rural decay have been evident in New England for more than a century.

In New York State the story has been essentially the same with minor variations. For one thing, farm abandonment began at a much later date. With the exception of the Hudson River counties, most of the State is younger than Massachusetts and Connecticut. Then too, what we call our marginal land has on the whole greater agricultural possibilities than the thin, boulder-strewn fields characteristic of so much of New England.

Our depopulation did not begin so

early and generally it has not gone so far. A study of Census Reports will show that almost every agricultural county of our State reached its all-time-high in population in the census of 1860. Then came the Civil War. When it was over, too many farm boys were left in unmarked graves somewhere south of Mason and Dixon's Line. But a greater factor was that four years of marching and counter marching had changed tens of thousands of farm boys into foot-loose soldiers, at home anywhere, and many a boy who normally might have continued to till the hillside family farm found it perfectly easy to slip his moorings and seek new fortunes in far places.

The State census of 1865 and the Federal census of 1870 give unmistakable evidence of the decline of population in our rural areas during that decade. In addition to the factors mentioned above, there was a declining birthrate, and there were progressively smaller families than in earlier days. And besides, the age of the machine and mass production was at hand, with the result that the little industrial establishments and the rural handicrafts were going into an eclipse from which they would never emerge.

In 1860 we had in our midst a host of craftsmen who were a component part of the community life. A complete catalogue of them would make a fairly lengthy list. There were coopers and cobblers and tanners and wagon makers and sleigh builders and cabinet makers. All of them were with us in 1860, and almost all of them, save only the blacksmith, had become extinct by the turn of the century. Now, alas, even the blacksmith is letting his forge grow cold. Then in almost every town there was some tiny water-powered industry. There were everywhere fulling mills and carding mills and other industries indispensable in the Homespun Age. The little stream which runs through our pasture in Schoharie County is hardly more than six miles from its source to its mouth, but along it can be found the earthen embankments of 11 mill dams, most of them more than a century old. The last waterwheel stopped a generation ago.

In the midst of these far-reaching changes, the farms still held on bravely. The number of farms and farm acres continued to increase until 1880 or later. In some counties the decline of farm populations first appeared in 1885. It would seem that in much of our marginal hill-country the cycle from settlement to abandonment ran something more than three generations, or roughly 100 years.

Take for example that Chenango County township with the name recalling a Greek province and a great battle of the long ago: Pharsalia. It is a name so romantic and musical that I like to say it softly to myself—Pharsalia. It is notable only because it is a township, once full of people, where farm abandonment has gone further than is common in New York State. The first settlers came about 1790. Many of them were from Rhode Island and many bore the honorable name of Brown; in fact there was a time when a majority of all the voters in town rejoiced in this same family name. Those first pioneers came marching in with high hopes and great courage. They hacked out clearings in the forest and built cabins and sowed wheat and planted corn in the never-very-fat soil and lived hard, laborious, and perhaps narrow lives. But they seem to have been well content.

Their children—the second generation—carried on. They built frame houses and better barns and laid wonderful stone walls and dug wells and planted orchards. They established churches and built school houses and out of farming made a farm civilization.

The third generation—the generation of the Civil War—continued much the same pattern of life, but they began to wonder and to ask questions. With them, hope was alloyed with doubt.

The fourth generation looked about them and fled. The cemeteries, left behind, remain the most permanent memorials of a cycle that took just about one full century. What has happened in Pharsalia is typical of what has occurred in varying degrees in all of the less fortunate agricultural regions of our State.

Now I insist that farm abandonment is primarily a social rather than an economic problem. Perhaps for a state as wealthy as ours and with resources so vast, it is not, measured in dollars, a very serious matter that five million acres of never very fertile farm land should disappear from the tax rolls. After all, the assessed value of all that imposing acreage is less than that one mid-town New York City block on which stands the Empire State building. The real problem that ought to concern us is the welfare of the people who are left behind after half of the community has gone. For remember that farm abandonment does not take place in solid blocks of townships or fractions of counties. Neither is it ever really completed. There is probably not a township in the State, unless it be in the heart of the Adirondacks, which does not have some land that is really worth farming. There will always be narrow valleys or pockets among the hills which some hardy farmer will continue to operate after all his neighbors have gone.

OUR State Department of Education sees to it that no child, however remote his habitation, is left without educational opportunities. But by its very Constitution the State is forbidden to care for the churches, town halls, libraries and playgrounds, nor can it undertake to provide for those community intangibles which are a part of sound community life. So it is that when a large part of any rural population departs, the unfortunates left behind are apt to find themselves living in what is little more than a rural slum.

There is not space here to discuss this particular matter in any detail. But this much is certain. The whole question of declining rural populations and farm abandonment is first a human problem and secondly an economic problem. It concerns the sociologist more than the tax collector. In other words, our human resource comes first.

But if the problem is primarily human, its solution is economic. Our abandoned land must be reconditioned and used wisely if it is to afford a decent livelihood to individuals; if it is to be an asset, rather than a millstone round the neck of our rural communities. There are almost infinite possibilities in such a program of restoration. The whole character of rural life in such areas could be revitalized.

This is a matter important enough—not only to the people directly involved, but to the whole State—to merit the best efforts of wise statesmanship and applied conservation.

JARED VAN WAGENEN JR., who wrote this article, lives on a hillside farm in Schoharie County that his family has held for 150 years.

This article, in which the author points out the human factors involved, is the second in our discussion of the Empire State's five million acres of abandoned land—one-sixth of the State. In our last issue we traced the origin of this problem and part attempts to solve it; in the next, we will discuss the means of acquiring abandoned land and the possibilities of reclaiming it.

Calling All

Your wildlife needs help. Here's how one group of sportsmen is providing it.

A SHARE of the battle to aid wildlife rightfully falls on the sportsmen, for they stand to profit most. More and more sportsmen's clubs are recognizing and accepting that responsibility. A few are doing something about it.

This is a brief report on one such group. It is written with full appreciation that other clubs also are doing an excellent job and are deserving of equal recognition. Lack of space and the fact that we have had an opportunity to study the Fayetteville-Manlius Rod and Gun Club project restricts the report to that unit at this time.

It is our hope that this example of what a modern, conservation-minded group is doing may contain ideas for others who are wondering what kind of a program their club should adopt.

The activities of the Fayetteville-Manlius Rod and Gun Club are centered in the Limestone Creek area in Onondaga County. This particular section has afforded fine cover for small game and deer. And the streams have contained plenty of fish.

But, as with many other sections, "things ain't what they used to be." Small game—the pheasant in particular—has become conspicuous by its absence. And fishing could be better. Many causes have been advanced. The authorities place lack of food and cover among the most important ones. Directly related, of course, are loss of top soil and lowering of the water table.

The sportsmen felt that improving the habitat for fish and game would go a long way toward increasing sport and, at the same time, directly benefit the farmers. If they could provide more food and better cover both for breeding and protection, and so increase the carrying capacity of the habitat, wildlife, over a period of time, would repopulate the area through natural reproduction on a more permanent basis and in greater numbers than would be possible by artificial propagation and restocking. Such a program would also produce hardier, gamier species much more to their liking, and would establish better relations with the landowner.

The big question was how to go about it.

There are two features in the club's answer to that problem which should be emphasized. The first, and the one which gave us the most pleasure to discover, was the fine spirit of sportsmanship with which the project was approached and is being carried out. The other was the careful research and study made including use of the services and experiences of the Department through its District Game Manager* and of the U. S. Soil Conservation Service through the County Soil Conservation District. The result was a long-term program based on the latest accepted wildlife-management practices.

* Ben O. Bradley, Syracuse.

This project is wide in scope. The fellows refer to it as a four part program. They are: planting of evergreen trees—for game shelter and erosion control; planting of shrubs—for food and cover; fencing these plantings—to protect them from domestic livestock; and planting and fencing stream banks. In addition, they have pheasant rearing and stream improvement projects.

When boiled down to this simple listing, the program looks easy. It is anything but! There was a tremendous amount of preliminary work that demanded many man-days of labor and research by the original few. What to do, how to do it, when and where to do it, how much to do, and who would do it—all had to be worked out. Then the other fellows had to be sold on the idea. And so did the landowners who, after all, are the cornerstone in the building of nearly all wildlife management programs.

HAVING decided that restoration of habitat was the essential thing, the next question was how this could be accomplished. Money, labor, materials and land were needed. The club had limited money; some of the labor would have to be paid for, some must be donated. The same applied to the materials. But the land belonged to the farmers; how best approach them? That answer is reserved for the end of the story because of its value

Sportsmen

to all who seek such cooperation.

Where to do the work was a stickler. The Limestone Creek watershed contains a thousand farms from which only 14 could be selected the first year. It was decided to choose only farms that were signed up with the County Soil Conservation District and which needed planting, with no consideration to be given to the size of the farm or to whether the farmer was rich or poor. The Club also felt that help should be given to farmers regardless of whether or not they were able to carry out the work themselves. In this way there would be no discrimination, and every one would be treated alike.

And, what is most important, *the work would be done.* Even farmers who could afford to do the job just couldn't find the time because the planting had to be done in the spring, their busiest season.

The reason for choosing farms signed up with the Soil Conservation District was that such farms were either already mapped and the conservation plans for them drawn up, or would soon be mapped and planned.

Also, these farms should be scattered throughout the watershed so that, if the method of selection and yearly amount of planting were continued until all farms were included, in—say fifty years—there would be the maximum of age classes of cover so desirable for game. In fact, by that time, the timber first planted should be ready for harvest and the cycle could be started all over again.

HOW MUCH to do each year would depend on these factors: the club's available finances and labor; the cost of labor; the number of trees both free and to be paid for; and the amount of money and labor the landowner would provide. (Some farmers have been found willing to turn back benefit moneys received from the A.A.A. and to help foot the bills in other ways so long as others handle the task of doing the actual work.)

There was also the problem of who should do the job. Many sportsmen volunteered but paid help also was required. The first year 75,000 trees were planted. High School and Forestry students, Boy Scouts, Future Farmers of America, and 4H Club members did most of the work at a basic rate of pay per thousand trees planted.

The cost of the first year project follows:

Cost of Trees:	
75,000 @ $2.00 per 1,000.	$150.00
Tree Planting:	
19,600 by F.F.A. and Boy Scouts @ $7.50 per 1,000	147.00
47,750 by Forestry Students @ $10.00 per 1,000 plus $41.20 for supervision and $24.65 mileage	543.35
(17,650 planted by club and farmer at no cost)	
Fencing:	
Wire and staples $24.10	
Labor 45.90	
Total fencing	70.00
Total cost of project....	$910.85

Among the several beneficial features of the tree planting project are those directly influencing woodland game and aiding in erosion control. On the farms a total of 18 separate blocks of conifers were set. These will provide much needed winter shelter which is conspicuously lacking in the area. The plantings may be said to condition the game cover adjacent to them. Thus, while 75 acres were actually planted, the benefit to game will be felt on many hundreds of acres. For example, several plantations are adjacent to large hardwood blocks. Others are in or next to fall feeding grounds of wild apple and hawthorne. Some connect hedgerows with nearby stands of young hardwoods. In other words, each planting of pine will give maximum benefit to game by providing the most urgently needed cover in its most desirable size and position.

On two farms, fencing amounting to 150 rods was required to protect the trees from grazing cattle. Perhaps, in future years, more emphasis should be placed on the fencing of wood lots and sources of water against cattle.

In carrying out their project, the Fayetteville-Manlius Rod and Gun Club utilized cooperation from three sources, all necessary to any group hoping to do similar work. In the order contacted. they were:

The District Game Manager of the Conservation Department, the County Soil Conservation District and the landowners in the areas affected.

The District Game Manager helped the fellows formulate their plans and provided the needed technical advice on game management requirements and brought to the groups other services of the Department.

The Onondaga County Soil Conservation District is set up to aid farmers in carrying out soil conservation practices. Its technical staff plans the complete program for any member farm requesting the service. Farms are mapped and recommendations made for the best land-use and conservation practices for various portions of the farm.

The method of cooperating with the landowners of the Limestone Creek watershed in planting trees and shrubs, fencing woodlots and water supplies from livestock and controlling stream bank erosion—all of which fosters friendly relations with the farmers and at the same time benefits wildlife—is deserving of special commendation. It is based on the object, purpose and scope of the club as set up in its constitution. It speaks for itself:

"To propagate, preserve and protect forest, fish, game and waters.

"To aid and assist in the enactment of laws for the preservation of forest, fish, game and waters.

"To create and foster a public sentiment in favor of better protection of forest, fish, game and waters.

"To exercise every reasonable means to create a better condition and feeling between true sportsmen and the farmer and to aid and assist him in the protection of his property from vandalism by unscrupulous hunters and fishermen."

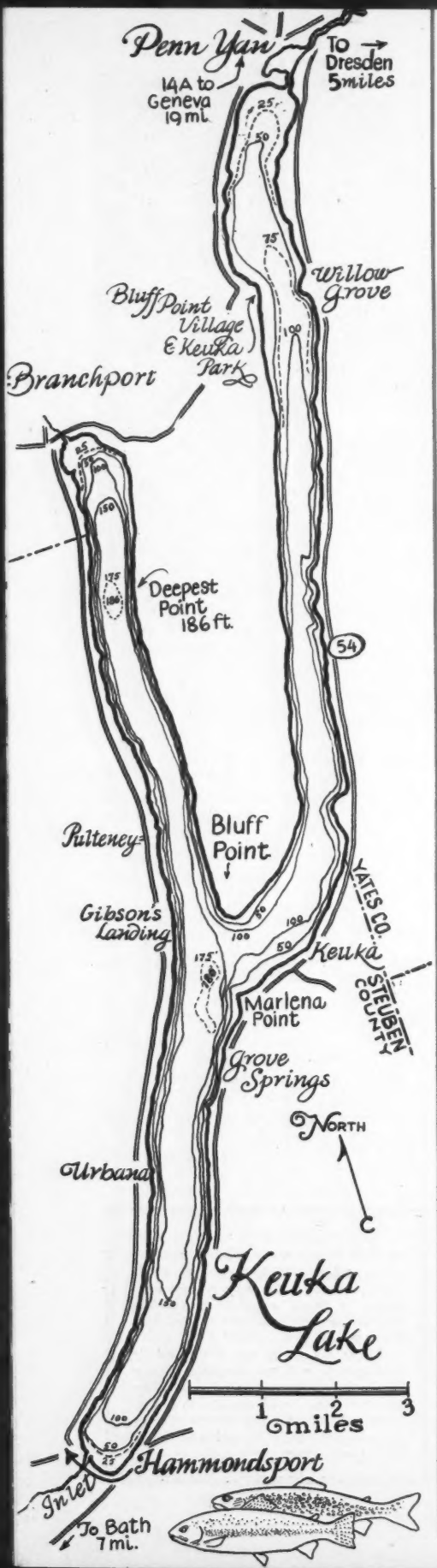
How well these club members are living up to that code is proved by the fact that, in carrying out their project, not a farmer was asked for any favors—no hunting privileges, no posting of land for the club, no cutting of Christmas trees—nothing but the opportunity to do something for wildlife.

When more sportsmen's groups act in that spirit, conservation will become more of a reality and the call of wildlife will be answered.

—FRED EVERETT

Many sportsmen's groups write to this Department for suggestions on programs which their club could undertake to keep it an active unit. Some of those requests are based on selfish motives, others are "for the good of the cause."

Programs such as described in this article will answer both groups because, whatever benefits wildlife, benefits the sportsman. We recommend this article for the earnest consideration of all sportsmen and landowners.



KEUKA

ARCH MERRILL, in his book describing the Finger Lakes, referred to Keuka as the "lady" of the lot. He stressed her beauty, her friendliness, her appeal to those who love the out-of-doors.

What Mr. Merrill should have added is that—being a lady—Keuka is also unpredictable: that she's a prima donna of the first water.

Comparisons are boring, but the following might illustrate that point:

Back in the 1930's I spent the better part of three weeks dragging Keuka's depths with copper line and spoon for a total take of one two-pound trout. If memory serves me correctly there were only four others caught by parties using the same boat livery. Even the proprietor of the place said the lake was licked—which is darned unusual coming from a man who rents boats.

The following season night fisherman alone, operating from this one stand, took more than four *tons* of trout! This hand-and-line catch amounted to some 2,000 fish, all voluntarily reported. How many there were unreported is anyone's guess. Ditto on the number taken by day fisherman and by cottagers who owned their own boats.

Which means, simply, that you take your chance with Keuka—and that the chance is well worthwhile.

This Lady of the Lakes stemmed from the same geologic changes which produced Seneca, Cayuga and Canandaigua, but Nature made her different. She was fashioned into a great blue "Y", with gently sloping hillsides and an imposing point called the Bluff which separates her two arms. By Seneca's standards she is not deep, 186 feet being maximum. Her 60 miles of shoreline are far more accessible and the most heavily populated by cottagers of any lake in the State.

And, she has a background:

To the Seneca Indians, she was "Canoe Landing", and their fishing paradise. There were no populous villages along her shores, and she was spared the misery and destruction of General Sullivan's punitive warfare during the Revolution.

Near what is now Branchport, at the extremity of the western arm, lived Otetiani, the famous Indian philosopher better known to history as "Red Jacket". Here later settled Jemima Wilkinson, the Universal Friend, whose strange religious cult formed the first settlement in the Genesee Country.

At the end of the eastern arm, Pennsylvania Dutch and New England Yankees settled their sectional squabbles by changing the name of their community from Unionville to Penn Yan.

From that point to Hammondsport, at the southern end of the lake, there was once a steamboat traffic which rivaled that of any waters in the State.

Hammondsport itself has two distinctions. Here Glenn Curtiss, creator of World War I's famous "Jennie", made the first plane flight in the Empire State, in 1908, and later created an amphibious ship which rightfully distinguished Hammondsport as the birthplace of naval aviation. Here, too, is the hub of America's champagne industry, created in 1861 and still bubbling over with good cheer.

But . . . we were talking about fishing.

Back in 1881, Seth Green, "Father of American Fish Culture" and onetime U. S. Fish Commissioner, wrote of Keuka as follows:

"I think it (Keuka) unsurpassed by any waters in America as a fishing resort. On August 28 last I took, with hook and line, 19 salmon trout weighing 113 pounds, and on October 1, 1880, 33 black bass weighing 106 pounds."

Were it legal, and were a man piggish enough to put his mind to it, Seth Green's catch would very nearly be matched today in Keuka—at least so far as lake trout are concerned. Seneca included, there is probably no water in the country that produces as great an over-all yield. Much of this is, of course, a result of pressure; no lake in this State takes a bigger beating for its size.

MR. GREEN gave things impetus by creating (at Keuka Landing) his famous Seth Green rig, an outlandish deep water gear with a multitude of leaders, designed for either **live bait or** spoons and capable of covering depths from surface level to 100 feet. (See Vol. 1 No. 1, *The Conservationist.*) This rig was later developed for night use, fished under reflected light, and today the bulk of Keuka's trout are taken by this method. Look out on the lake on a dark summer night, in the general region of the Bluff, and you can count the lights from upwards of a hundred boats.

The Conservation Department has been hard put to match this pressure but all in all has been bearing up pretty well under the strain. Lake trout have

Keuka's Big "Y"

been stocked in Keuka since 1870—first from the Caledonia hatchery and in more modern times from the Bath hatchery some six miles from Hammondsport on Cold Brook. Up to 1900 Keuka received only fry; today the plant is of fingerlings or yearlings (six to seven inch stock). In the past five years, for example, the lake has been given a transfusion of more than a million and a half trout in these size brackets.

Sportsmen themselves have aided much in maintaining the fish population. The majority gave unanimous support to proposals which lowered the legal daily trout limit from 15, to 10 and finally to 3 fish—realizing that at Keuka's average of 3½ pounds per trout, three's a-plenty. When the lake was plagued by piracy some years back the Seth Green Club, operating near Penn Yan, dug deep into their jeans to provide power lights which covered spawning beds at night and drove netters into more legitimate pursuits.

Keuka's lake trout fishing is specialized, as it is in all the Finger Lakes. In the daytime you use the Seth Green rig with spoons, or copper wire (no rod, please) with one of the following spoons: Mack 66, Sutton, Hinckley or #5 Pflueger Record. At night, the Seth Green again, baited with sawbellies.

DON'T go to Keuka loaded for bear. Wait until you get there to rig up. There are sporting goods dealers in Hammondsport and Penn Yan who will outfit you with tackle to fit the needs and tell you how to use it. Some boat liveries will even rent you a Seth Green and provide bait and light. And leave your outboard at home; the Keuka fraternity frowns on guys who troll from power boats.

In the early part of the season (April 1 to mid-May) you will operate from either Branchport or the Willow Grove section at Penn Yan, or fish the Hammondsport flat. Memorial Day is D-Day in the waters around Bluff Point, and the fishing will hold up there during the entire summer season, with emphasis on the deeps between the Bluff and Marlena Point when warmer weather drives the trout down. In the fall it's back to Branchport.

Our Next Issue features Ronkonkoma

If you don't like lakers, Keuka has a respectable rainbow fishery as well. The Inlet, at Hammondsport, commands a good run of these trout each spring and there is middling good fishing as far up as the Bath hatchery. And browns and natives as well. New York's record rainbow, by the way, came from Hammondsport in 1946. It weighed 21 lbs. This past spring the Inlet itself produced a 19 lb. brown.

You are likely to pick up a rainbow in any part of the lake once they have completed their spawning run. The majority are taken by lake trout rig fishermen, but it is always a good idea to put out an auxiliary line with a light, high-riding spoon when trolling, because most rainbows are to be found near the surface.

Smallmouth bass—Keuka's next most important fish—are generally distributed, but most anglers lean to such favorite spots as Willow Grove and Gibson's and the Bluff area in both east and west branches. Night fishing with the black fly rig, described in our Seneca Lake article in the October 1946 issue, is popular sport and highly productive in late fall.

The bigmouth bass is present in fair numbers at the extremities of the lake, in weedy areas, and pickerel are well represented in the same sections, with the Penn Yan end probably the best producer. Perch are abundant generally, and there is a wealth of panfish (sunfish, rock bass and bullheads) for Junior. During the winter, ice fishing for perch at Penn Yan usually pays big dividends.

Keuka's waters are clean and her game fish are fat and sassy, particularly due to the presence, in large numbers, of the previously mentioned sawbelly, or alewife. These small forage fish have been present in the lake for some 60 years and provide an unlimited supply of food for larger species.

There are carp in Keuka, but no other rough fish such as the burbot, and the unsightly lamprey, which is a parasite of trout in Seneca, is absent.

IF YOU visit Keuka, make up your mind beforehand that you are going to have a lot of company and plenty of competition afloat. Just as a tip, that section of the lake between Keuka Landing and the Bluff is called Broadway by the natives, and the boat traffic is a sight to behold when the trout are in and hitting. But your chances are still good.

You will like Keuka—her sparkling waters; the willows which whisper in the wind along her shores; her imposing Bluff from which, on a clear day, you can see a dozen lakes and seven counties; her great vineyards and orchards, and not least, her wine cellars.

The "Lady" has a little bit of everything. But, as we said at the beginning of this piece, if you're going to make a date, first do a little missionary work to find out the kind of mood she's in.

—Bob Bush

SPRUCE: backbone of the north woods

SPRUCE is the backbone of the "north woods"—that band of evergreen wilderness that circles the globe, north of Civilization (so-called), and south of the Arctic. The very word "spruce" suggests deep forests, vast lonely expanses, and savage winters; it recalls tales of the lumber camp and the log drive, the long trail, canoe trips over white water, and the mighty deeds of the mythical Paul Bunyan.

The three most important spruces are the Norway spruce of Europe (also planted widely as an ornamental), the Sitka spruce of the Pacific Coast, and the white spruce. This last named, together with two associates, the black and the red, are the ones which occur in New York, so we will concentrate on them. The black spruce grows mostly in the bogs, along with balsam and tamarack. (Those little fellows you see in the chain-stores at Christmas time are black spruce, treated to give them a brighter color and to keep the needles from falling off. The pint-sized, persistent cones are what distinguish them from the other spruces).

White spruce is one of the very few "transcontinental" tree species that we have. It starts there in the salt spray and fog of the Maine coast, and "reaches Bering Strait at 66° 44′ north latitude". In between, it forms the bulk of the great spruce forests of Quebec and Ontario, pops up in the Black Hills of South Dakota and the Canadian Rockies, grows all through the basin of the Yukon, and is finally thrown for a loss by Old Man Winter about 20 miles from the Arctic Ocean.

No wonder that a tree so adaptable to a variety of conditions should be prized by the forester, and in our reforestation program in New York State, white spruce is being used more and more. For one thing, it is practically immune to attack by the "white pine weevil" which has ruined so many acres of Norway spruce.

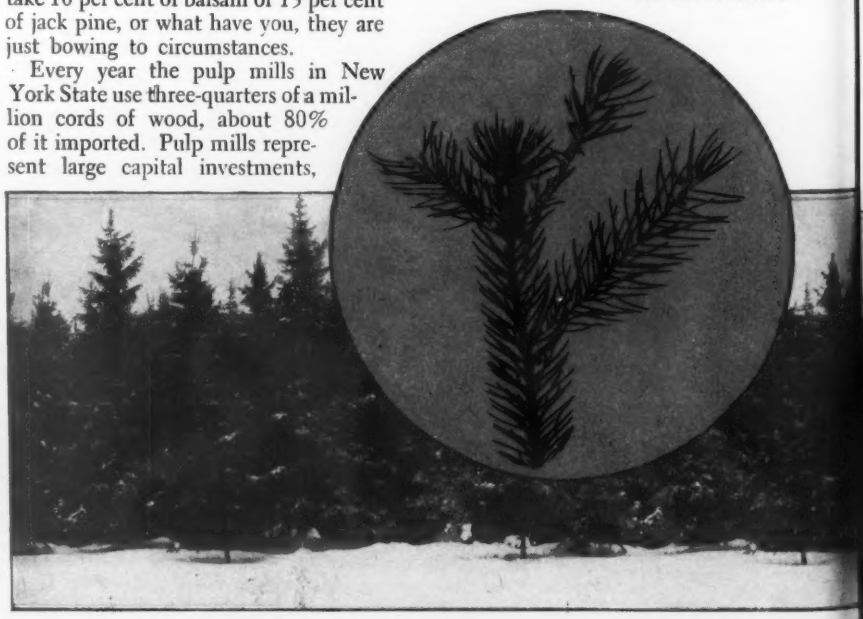
The principal native spruce of New York is *Picea rubens*, the so-called "Adirondack Spruce" or technically speaking, red spruce. This is a good lumber tree and is also noted for such interesting products as spruce gum and sounding boards for pianos, which latter are obtained from butt logs, known to the lumberjacks as "fiddle-butts". The foliage of the red spruce is a glossy dark green, with none of the silvery tinge that characterizes the other two northeastern spruces. Virgin stands of red spruce cover many of the Adirondack slopes, such as the Blue Ridge north of Schroon Lake and Mackenzie, and the Sentinel Range near Lake Placid.

WHATEVER its name, and wherever found, the chief aim of the spruce tree is to keep the newspapers running. Statisticians are fond of telling us how many acres of spruce it takes to put out one Sunday edition of the "Times" or the "Tribune", but let's not get statistical. The point is that spruce wood with its long fibres and easy "digestibility" has always made the best newsprint, and is still what the pulp men would use 100 per cent—if they could get it. When they tell you they'll take 10 per cent of balsam or 15 per cent of jack pine, or what have you, they are just bowing to circumstances.

Every year the pulp mills in New York State use three-quarters of a million cords of wood, about 80% of it imported. Pulp mills represent large capital investments, and can't be moved around from one place to another like sawmills. For these concerns, exhaustion of the local resource means bankruptcy, and so we find that the pulp mill owners and managers are becoming strong supporters of forestry.

The worst enemy of the spruce is balsam. Unless regulated, balsam will crowd out spruce after logging or fire, because it reproduces at a faster rate; and what's worse, it's the chief carrier of the dreaded "spruce budworm", which has literally annihilated the spruce-fir forests over hundreds of square miles in parts of Canada and New England. In New York, the budworm has invaded the Adirondacks in the past few years, but doesn't seem able to get a real foothold. This may be due partly to the fact that there isn't so much balsam growing right along with the spruce, as in Maine and Canada; it's also true that over here, the budworm itself has a lot of parasites that keep it in check. So, it looks as though we'd have our spruce in the Adirondacks for next Christmas and and many more to come.

—Ed Littlefield



SPRUCE GROUSE: not gone, not forgotten

THERE are still wild spruce grouse in New York. But if you've seen one lately you have seen one of our rarest birds. Not so rare, perhaps, as the heath hen, which once was common on the pine and oak barrens of the Hudson Valley and Long Island. And not so rare as the wild turkey, which did all right when there were only ten thousand Indians after him but which lost out when a hundred thousand axes and fires began turning forests into wheat fields. But nevertheless rare.

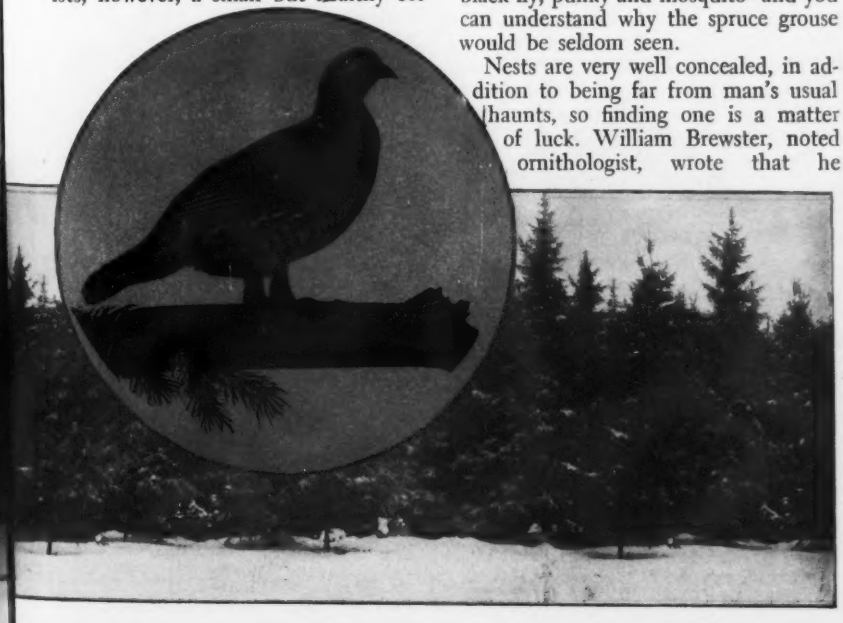
The spruce grouse, also known as spotted grouse, Canada grouse, spruce partridge and fool hen, originally dwelt in the dense, cold, swampy evergreen forests that stretched south from Canada into Maine, New Hampshire, Vermont, New York, Michigan, Minnesota, and on into the mountains of the Northwest. In New York his habitat was in eastern Lewis, northern Herkimer and Hamilton, southern St. Lawrence and Franklin, and western Essex counties. There these birds were locally numerous as late as the 1880's, but by 1910 they were considered on the road to extinction. There still exists, however, a small but healthy colony on a private preserve in the town of Waverly, in Franklin county.

Never a popular game bird, the spruce grouse still deserves mention as a species that has been unable to survive civilization's shove.

Somewhat smaller than his relative, the ruffed grouse, the male spruce grouse is a handsome fellow, with orange-red bare spots over the eyes, black underneath from his chin to throat and breast, with a sort of vest of white-tipped feathers, a black tail with orange-brown tipping, and upper parts and sides wavy-barred with black and gray. The female is barred black and gray with the same rusty-tipped tail, but lacks the black underparts and the red, bare patches over the eyes. Neither male nor female have the neck ruffs, the crest and the banded tail of the ruffed grouse, and are further distinguished from that species by legs that are feathered to the toes.

Such a color pattern blends well with dark coniferous foliage against a bright sky. Add to this protective coloration a tendency to sit still rather than flush before an intruder—and a habitat in coniferous swampland, realm of the black fly, punky and mosquito—and you can understand why the spruce grouse would be seldom seen.

Nests are very well concealed, in addition to being far from man's usual haunts, so finding one is a matter of luck. William Brewster, noted ornithologist, wrote that he searched for many years an area in Maine where these birds were numerous without finding a single nest, nor did the offer of a reward bring any results. Those nests which have been seen are described as being on low elevations in the swamp, beside a stump or the trunk of a tree. Lined with slender twigs, grasses or leaves, the nests contain from 8 to 14 eggs, slightly larger than those of the ruffed grouse.



THE spruce in the bird's name really means what it says. Not only do spruce trees provide shelter and concealment, but they are also the principal source of food nearly the whole year around. For a brief period in the late summer and early fall, the diet consists of insects, seeds and fruit of such woodland plants as blueberries, partridge berries, dwarf cornels and snowberries. At this time, spruce grouse can be found at higher elevations and even on open ground. The young birds are then said to be quite edible, but during the rest of the year, they subsist on a diet of leaves and buds of the spruce, with some balsam and larch thrown in for good measure, so that the flesh is dark and its flavor like turpentine.

A species with such a restricted diet is, of course, exceedingly vulnerable to destruction when its principal source of food is drastically reduced. Likewise, a bird with such sedentary habits is an easy mark.

So let's not blame the virtual extinction of our spruce grouse on the Indians, foxes, wolves, panthers, bobcats, weasels, mink, otter, hawks or owls—they couldn't have wiped out the spruce grouse in a thousand years. But man, who could kill off an entire brood stock in a minute just to see what would happen, who could cut off thousands of acres of spruce for his mills, who could start fires that destroy every living thing over vast areas—in less than a century man has succeeded in doing to the spruce grouse what Indians and predators could never have done.

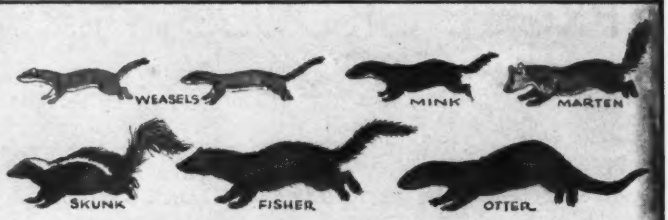
—RALPH SMITH

The INSIDE on the OUTDOORS

by Clayt Seagears

NEW YORK'S UNUSUAL WEASEL FAMILY

The Adirondacks is one of the last strongholds of the rare fisher and the rarer (?) marten in eastern America.



New York or Long-Tailed Weasel (rear) and Bonapart Weasel in Summer coat

← FROM MALE 11¾" LONG (FEMALES MUCH SMALLER)

MALE 17½"

Ermine in Winter - worth $1 to $2.25

Fisher (pekan or black cat) are increasing under strict protection although there is still considerable illegal traffic in pelts. Travels long distances overland but can catch the agile marten in trees.

FROM MALE 36¼" LONG ~ 9 LBS. 2 OZS.

Mink are becoming relatively scarce in some areas because of continued high pelt value ($20-$30). New York's 483 licensed mink breeders supply about 55,000 skins per year! Trappers normally take about 17,000 pelts during the States Nov. 5 to March 15 season. (1947-'48)

DRAWN FROM MALE 23" LONG WEIGHING 2 LBS, 1 OZ.

Marten, or American sable, need vast expanses of green timber to survive. That's why the Adirondacks is one of their last strongholds. They require constant protection. Red squirrels are favored food items.

ALL LENGTHS NOTED HERE WERE FROM MALES ONLY. FEMALES ARE NORMALLY SMALLER

MALE 25½" 4 LBS. 1 OZ.

Skunk -- Annual take averages about 75,000 - mostly by farm boys. The present fur value is $1.25-$2.25

FROM MALE 27" LONG 5 LBS. 7 OZS.

FROM MALE 43½" LONG WEIGHING 20 LBS. 2½ OZS.

Otter -- most interesting member of the whole weasel tribe -- strikingly resembles the seal. Prefers each other's company, unlike other group members. Spends much time at play. New York permits occasional trapping seasons. Pelts are worth about $20.

CLAYT SEAGEARS

CRY WOLF—There has been much recent publicity in the northern counties regarding the presence of so-called wolves. At least three counties have paid bounties on them in recent months.

The Conservation Department and the Department of Mammalogy at Cornell maintain that the last authenticated record of a wolf in New York State was obtained about 50 years ago. Most of the *wolf-like* animals taken during recent years in the State and sent the Department for identification have turned out to be German shepherd (police) dogs gone wild. Others were identified by Department experts, or by the Museum of Natural History, as dog-coyote hybrids. There also have been several records of true coyotes, sometimes locally called "brush wolves." No wolf, however, has shown up since the turn of the century.

New York State had a bounty on wolves between 1871 and 1897. During that time a total of 98 wolf scalps (including a number of animals of questionable origin) were submitted for payment. Only 18 individuals were taken between 1895 and 1897, and a few years later intensive checks revealed the wolf to be extinct, along with the mountain lion or puma.

According to all available records, the old New York State wolves averaged in weight between 80 and 100 pounds, although larger individuals have been recorded. The coyote averages very much smaller, but is an exceedingly destructive animal just the same.

LOST WEEK-END—Mr. David Davis of Poughkeepsie returned from an Adirondack hunting trip last November with quite a story to tell. He told it to a reporter from the Poughkeepsie New Yorker. It all happened in what was described as the "thick, animal-inhabited fastness" between Raquette and Tupper lakes.

"At about three o'clock Saturday afternoon," said Mr. Davis, "I thought Tommy Tabone and John diGilio (his companions) were lost in the forest. I went looking for them. Soon I realized I was lost myself. I roamed through the thick forests until dark. I stopped near a big rock and started to build a fire to keep warm. A bobcat jumped on my back. I fought the cat several minutes before I killed it with my knife. Sunday morning I tramped through the woods, looking for a road. Throughout the day I wandered around trying to find my way out of the woods. When dusk came I stopped near a pond and built a fire. As I was standing there I heard noises that sounded like an auto motor in the distance.

"I thought help was coming. I looked around and saw a bear coming toward me: I grabbed my gun and pulled the trigger. The mouth of the gun barrel was pressing against the bear. I killed it. I was cold, hungry, tired, and scared. I stayed there all night. Monday at dawn I started on. I saw a house and went to it. A family named Cleveland fed me and then called the State Police from Tupper Lake. I was safe."

Mr. Davis left his trophies in the woods.

OH BROTHER! PLEASE!—Every morning—and we mean more than 300 of them a year—hundreds of letters and postcards pour into this office from outdoor-minded New York Staters, requesting information on fishing, hunting, camping, and all related facilities which come under the jurisdiction of

(Continued on next page)

There's One Born Every Minute

A Phone Call Received During The Recent Fire Season

Voice: Is this the Director?
Director: *Yes, Ma'am.*
V.—Before going to work this morning my husband asked me to phone you. You know my husband?
D.—*Perhaps. What's his name?*
V.—Smith; Henry Smith.
D.—*No, Ma'am. I don't believe I know Mr. Smith.*
V.—That's strange. Henry buys one of your licenses every year. You must be a new man.
D.—*I've been with the Department a number of years.*
V.—Henry says he knows you. Says he went to school with you.
D.—*Yes, what school?*
V.—State College.
D.—*I never attended State.*
V.—Maybe it was Albany High School he said.
D.—*I never attended Albany High.*
V.—My! For a man with no education, you seem to hold a very important position.
D.—*I beg your pardon, Mrs. Smith. Just what is the purpose of this call?*
V.—Henry wants to know when the ban on hunting will be lifted.
D.—*Just as soon as the fire hazard is over.*
V.—When will that be?
D.—*Immediately following a good heavy rainfall.*
V.—When will that be?
D.—*We are hopeful it will be before the end of the week.*
V.—Can't you be more definite?
D.—*No Ma'am.*
V.—The last thing Henry said this morning was "Be sure to find out when the hunting ban is to be lifted." Henry will just kill me if I don't find out.
D.—(Aside) *I wish I could depend on it.*
V.—Can Henry go hunting if he only shoots pheasants?
D.—*No, not until after the ban is lifted.*
V.—The birds may be all gone south by that tme.
D.—*Pheasants don't go south, Madam.*
V.—That's strange. Henry has been saying all summer that the pheasants are nearly all gone.
D.—*There will be pheasants found in the fields after the ban has been lifted.*
V.—Must have all flown back. That will please Henry.
D.—*I hope so.*
V.—Now, when did you say the ban would be off?
D.—*I said, I couldn't say at this time.*
V.—Well, you put the ban on . . . you ought to know when you intend to take it off.
D.—*I didn't put the ban on, Madam.*
V.—No! Who did?
D.—*The Governor's proclamation.*
V.—You mean that Governor Dewey did it!
D.—*Yes, Ma'am.*
V.—*Oh!* I'm talking to the wrong man.

the Conservation Department.

This interest in what New York has to offer its people is flattering. It also means a mountain of work for all of us. We do our best to answer every request that comes in, and as promptly as possible.

But . . .

We can't give anyone the best in service when we are buried under an avalanche of such inquiries as these (and they're actual requests in one morning's mail):

"Please send me all the information you can on fishing in New York State."

"Can you send us any information on camps and cottages on lake or near lake, with all conveniences, good fishing, etc."

"Kindly send your booklet."

These vague requests, and hundreds of others like them, leave us with a feeling of hopelessness—in addition to detracting from the time we could spend answering more sensible letters. But there is a solution: BE SPECIFIC! Ask us where, when and what, and we can help you.

SUPERHEATER—The fish in Keuka Lake are inclined at times to be moody and hard to find, but at Keuka Landing there is a gentleman known locally as Superheater who has all the answers.

Among his many nostrums is the following technique for taking school perch:

"First you go down to the dock and catch yerself a perch—just a little one, mind ya. Then you get yerself a toy balloon, such as like kids have, and blow it up and tie on about two foot of line and tie it in the perch's jaw. Then ya throw the perch back in the water and sit down on the dock and watch.

"That perch will head straight for deep water, towing that balloon and headin' for friends. When the balloon stops, there's your school of jacks."

COUNTY FORESTER—When a county hires a forester, it's news—good news. Until recently, only Erie County had made such a move, but now Onondaga has followed suit.

The Onondaga County Park and Regional Planning Board has announced the appointment of Raymond Benson, of Manlius, as County Forester, and a look at his schedule would seem to indicate that Mr. Benson will be a pretty busy man. He will be responsible for the management of forests in the county's parks and public lands, and will also be available for consultation to town, community and other groups interested in reforestation and forest management.

The appointment of County Foresters seems to be a step in the right direction.

DDT—Complaints that the spraying of DDT as a mosquito control measure on Long Island has been killing the mallard and black duck breeders maintained by at least one large gun club have been found groundless by Dr. E. L. Cheatum, the Department's Senior Game Pathologist.

It wasn't DDT at all—it was merely lead poisoning that did the dirty work. The ingestion (eating to you) of shot pellets which get mixed up with the ducks' food on the bottom of ponds is virtually as fatal as a dose propelled by a few grams of powder. The gun club has been holding its breeders on ponds which had been heavily shot over and in which thousands of shot pellets had gathered over the years.

Robert D. Glasgow, State Entomologist, has given Cheatum's work a genuine and official pat on the back when he said:

"You have solved a problem that has troubled the duck breeding activities of the Flanders Gun Club apparently for some years. You have disarmed an unwarranted assumption that DDT used for mosquito control was responsible. You have thus removed an unfortunate and, I am sure, wholly unwarranted source of opposition to the necessary public service of mosquito control as carried on by Suffolk County."

LAST ROUNDUP—Two Rensselaer County hunters feel that they have now seen everything.

On the last day of the deer season they were coming down off a mountain near Stephentown when a fusilade of shots broke out in the valley below. This was followed by much hooting and yelling, then more shots, then a king-sized Hereford steer burst out of the brush and made off across a pasture. Hunters popped up from behind every bush, loading and firing as fast as possible, and at last the steer toppled over.

One of the spectators to this episode promptly notified the farmer that he had just lost a nice steer. "Good," said the farmer. "That cleans 'em up. We got the other one this morning."

It seems he had imported the steers from Montana early last spring, and had been trying to round them up ever since.

Out of the Past

DEER SHOOTING IN THE ADIRONDACKS

There was great excitement on the piazza of Paul Smith's Hotel. The ladies were alive to the matter that now absorbed the attention of all hands. They were drawing lots!

Lots for what? A grand hunt for deer was to come off the next day. . . . The brave, hardy, eager gentlemen from New York and other cities were now prepared to go out the next morning to renew the chase. They go out two or three times a week, and as the hunt is attended with great expense, exposure and fatigue, and many are to share in it, it is just that each should have a fair chance to bag the game and glory of the day. The shore of the lake is laid off into sections, and each section has its point of observation. When early morning comes, each deer slayer repairs to his post, and with all the patience he may possess, awaits the issue. With him, in a light boat, is the guide, who rows and knows the spot to which his man is assigned.

In the meantime a real huntsman, a paid and experienced man of the woods, enters the forest with a leash of hounds—some six or eight—attached to his belt. Well in, he lets off a dog, trained to the service and eager to have a run, who begins at once to get upon the trail of a deer. The hunter goes on and lets off another dog, and then another, until he has started the whole pack, who, running in circles, scour the whole forest, and seldom fail to scare up a buck. The deer, alarmed, instinctively takes to the water as the only way to break the trail and drive the dog off his scent. The noble animal rushes through the forest into the lake to swim across. He is the prize of the boat nearest to which he takes to the water.

The guide rows the boat in pursuit of him, and being able to row very much more rapidly than the beast can swim, has no difficulty whatever in overtaking him. When he has come up so near to him that the merest bungler with a gun, who could not hit a barn door across the road, can now put the muzzle of the gun into the ear of the animal, the gallant Nimrod from the avenue of the city blazes away with his new rifle.—**From the American Sportsman, November, 1872.**

COUNCIL MEETING—As we went to press, preliminary reports were coming in concerning the annual convention of the New York State Conservation Council, held December 5 and 6 in Rochester. Members of the Department who attended report that a greater number of counties were represented than ever before and that the two-day session was jam packed.

A talk on conservation in general by Ira N. Gabrielson, former head of the Fish and Wildlife Service and now heading the Wildlife Management Institute, and a talk on the waterfowl situation by Clarence Cottam, Acting Director of the Fish and Wildlife Service, were the outstanding contributions by out-of-State people. From within the State, Commissioner Duryea's annual report headed the program.

During the meeting a new feature was introduced, consisting of a forum discussion on legislation in which a number of Senators and Assemblymen took part. Various committees in the Council which have been working throughout the year also made their reports to the convention. The outstanding job in this connection was done by the committee, headed by Chairman Clarence Betts, set up to study the commission form of administration for fish and game. This group did an especially fine piece of research and it is hoped that in future issues it may be possible to discuss some of their findings and recommendations.

Mr. Herman Forster was re-elected president for the next year. Other officers elected were: vice-presidents, Arthur B. Flick, Westkill, Dr. William H. Fruden, Buffalo, and L. A. Williams, Ithaca; treasurer, D. M. Tobey, Victor; secretary, John Bain, Palmyra; and assistant treasurer, F. A. Demeree, Bainbridge.

NEW MOVIE—A new Conservation Department motion picture, "The Story of Fishing in New York," is now available for free public showing within the State. This 16 mm Kodachrome sound picture, believed the most graphic of its kind ever filmed, runs 45 minutes, has more than 300 scenes and hits the high spots of Empire State fresh water fishing and fish management.

Starting with the seasonal aspects of fishing, it shows the wide variety of New York's game fish and illustrates the various factors operating against good fishing. It then goes into the general program of fish management, protection, research, propagation and distribution methods, and stream acquisition and improvement. The film winds up with a series of scenic shots of the State's fishing waters with action shots of trout, bass and muskie fishing.

To get the picture for public showing, write the Division of Conservation Education as far in advance of the show date as possible. It will be sent free and must be returned the day after exhibition, for which admission may not be charged. Special arrangements may be made for out-of-state showing to Conservation Departments and other public agencies.

EXHIBITS—After a couple of weeks of comparatively easy going following the summer grind of the county fairs circuit, the exhibits section of the Division of Conservation Education again is busier than a two-headed cat in a fish store. It is preparing for an uninterrupted schedule of large sportsmen's shows which begins February 14 at Grand Central Palace in New York City and winds up 69 days later at the Buffalo Coliseum. Sandwiched between are shows at Schenectady (Feb. 29-March 6), Albany and Syracuse (conflicting dates of March 13-21) and Rochester and Utica (which also conflict March 27-April 4), The National Sportsmen's Show in New York runs Feb. 14-22 and the Buffalo event April 17-25. The Amsterdam show, incidentally, runs March 27-April 3, while others too numerous to mention fill the schedule.

DO YOU KNOW YOUR LAWS?

Whose Deer?

Dear Sir: The second week-end of the deer season a friend of mine knocked down a deer. He went to the spot and found that the deer was gone, but was bleeding. At this point he started to track the deer down. He was following the blood on the snow, for he knew the deer was hit hard and couldn't go far. After following the deer for five minutes, he heard a shot about 50 to 75 yards ahead of him. Coming to this spot, he found that the deer he had been following had been brought down by another party. My friend was alone, but there were three men in the other party.

Please inform me as to who is legally entitled to this deer.—James Bombace, Sauquoit, N. Y.

• There are no provisions in the Conservation Law which are applicable in this case. The Common Law of personal property applies. It is the policy of this Department not to construe or interpret for the public laws other than the Conservation Law.

But, in the case of Pierson vs. Post, it was held: "that actually bodily seizure is not indispensable to acquire the right to, or possession of, wild beasts; but on the contrary, the *mortal* wounding of such beasts, by one not abandoning his pursuit, may, with the utmost propriety, be deemed possession of him; since thereby the pursuer manifests an unequivocal intention of appropriating the animal to his individual use, has deprived him of his natural liberty, and brought him within his certain control."

For our own protection, we would like to point out that there have been other cases, arriving at other conclusions. But it is the custom, among sportsmen, that the man who inflicts the first *fatal* wound is entitled to the game, while a minor wound and subsequent pursuit convey no rights to it.

Sportsmanship would be useful in settling a dispute of this sort.

VIOLATIONS!—Last year game law violations hit such alarming levels in New York that they warranted a special article by Commissioner Duryea urging the cooperation of the public in this Department's enforcement program.

It was hoped such publicity would work. But look what happened during this past hunting season:

In two months the Bureau of Law Enforcement apprehended 1,237 violators—an all-time high!

That figure reflects, of course, a geared-up enforcement campaign by men who could see what was coming. It does *not* explain what has happened to sportsmanship.

Of this list, 246 were cases involving deer—shooting of does and buck fawns, possession of untagged venison, selling of deer, et cetera, et cetera. There were 236 arrests of men (and women) who were caught carrying loaded firearms in cars. How many of these were potential deer jackers is unknown, but one thing is certain: the need for more severe penalties for deer violations, especially jacking, which were unsuccessfully sought last year, becomes increasingly evident. We hope the 1948 Legislature will take action. After all, deer jacking, if it is to be stopped, must first be made unprofitable.

But we can't stop there.

We must face the question of whether not only the sportsmen, but the general public, is still apathetic to the piracy that is going on, or still believes law enforcement to be the job of the Conservation Department alone.

How about it?

THE GROUSE BOOK—The grouse book, representing the report of the New York State Conservation Department's ruffed grouse investigation, long heralded and anxiously awaited by wildlife technicians and sportsmen alike, is now available—for $10.00 (cost price). Its title: "The Ruffed Grouse"—(Life History, Propagation, Management). The book, size 8″ x 10½″, weighs 6¼ pounds, contains nearly 1,000 pages, four color plates, 127 drawings and sketches and hundreds of photographs and diagrams. It is the most comprehensive book on any wildlife species ever written.

The work of four main authors (Bump, Darrow, Edminster and Crissey) and a long list of cooperating contributors is woven into the book. The first and only edition of 7,500 copies, handsomely bound in red and gold, is now coming off the press. Orders should be sent to the Division of Conservation Education, Conservation Department, Albany 7, N. Y. The price of $10.00 includes mailing and handling charges.

FOXES have been condemned by sportsmen as largely, if not wholly, responsible for the recent decline in pheasant abundance. Available facts, however, have not been sufficient either to prove or disprove such claims. Foxes were known to eat pheasants and pheasant eggs as they had opportunity. That was all. Investigations dealing with grouse had shown the fox seldom to be a major limiting factor but they had been made when foxes were far less abundant than they have been during the last few years. Furthermore, the pheasant is a different sort of bird. The question could not be solved without further information that would constitute evidence of cause and effect.

During the past summer an experiment (see preceding issue) was designed to test that relationship on a large scale with particular reference to the survival of released game farm stock. The key to the plan was the fact that Seneca County south of the Barge Canal is quite narrow and lies between Seneca and Cayuga lakes, which form natural fox barriers, as does the canal when not frozen. A campaign to reduce foxes would, therefore, have to contend with infiltration from the outside only at the southern end. It was proposed to eliminate foxes from this tract and then to release on it, and on a comparable tract where no trapping would be done, similar groups of game farm pheasants. All these birds would be banded and reports of recovery during the hunting season would constitute the measure of survival up to that time.

ACCORDINGLY roughly 90,000 acres in Seneca County adjoining the Barge Canal and an area of similar size in Ontario and Yates counties directly across Seneca Lake to the west were selected. Beginning in early August, intensive trapping throughout the former area was continued until the hunting season. At least seven, and at times as many as 14, expert trappers were engaged in this work. A total of 332 foxes were taken. Although complete elimination was not achieved, this obviously represented a very large reduction and it was evident that comparatively few remained. On the untrapped area observations indicated the presence of a substantial population of these animals.

A total of 10,756 pheasants from the State game farms was released on these areas, primarily during the first half of September. These were "run of the mill" stock and included both sexes. All were banded and each lot was divided into equal parts, with respect to source, age and sex, one being placed on each area to insure as great comparability as possible. This involved 2,775 cocks on the trapped area and 2,888 on the untrapped.

During the hunting season, October 20 and 21, Department personnel operated a total of 16 checking stations on both areas to collect data regarding hunter success, bands recovered, etc. It will take some time to analyze thoroughly the information collected. Some of the preliminary figures, however, are of interest at this time.

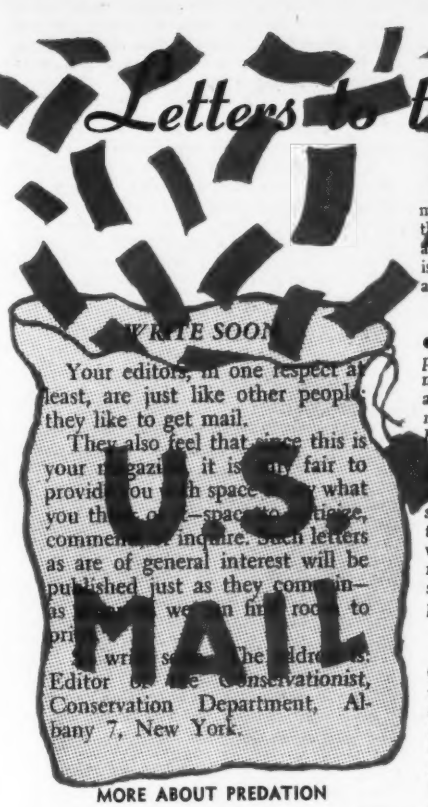
Comparative Hunter Success Based on Checking Station Records

	Trapped Area	Untrapped Area
Number hunters checked..	1807	1534
Total pheasants taken.....	782	554
Number banded pheasants taken	383	445
Number unbanded pheasants taken	399	109

The above tabulation comprises only records of hunters who stopped at the checking stations. Additional records of banded birds taken were obtained through other channels. At the time of this writing the totals represented 15.56 per cent and 15.54 per cent of the number of cock birds liberated on the trapped and untrapped areas, respectively. Other reports will continue to straggle in so that these figures will ultimately be changed somewhat. Nevertheless, they indicate a very close similarity in the proportion of returns from the two areas. However, conclusions with respect to the influence of reducing the fox population must await further study of the data, and further field observations this winter and the following spring.

Among other observations, however, it may be noted that the results of the hunting season substantiated indications from the farmer inventory last spring that Seneca County had a somewhat greater population of wild pheasants than the area in Yates and Ontario counties. It was also demonstrated that liberations of game farm stock of the size involved in this project provided good hunting, especially on the untrapped area where, because of a smaller population of native birds, the take would have been quite low otherwise.

Letters to the Editor


WRITE SOON
Your editors, in one respect at least, are just like other people: they like to get mail.
They also feel that since this is your magazine it is only fair to provide you with space for what you think—space for advice, comment or inquire. Such letters as are of general interest will be published just as they come in—as soon as we can find room to print them.
Please write soon. The address is: Editor of the Conservationist, Conservation Department, Albany 7, New York.
U.S. MAIL

MORE ABOUT PREDATION

Dear Sir: An item in the Sunday N. Y. Times, datelined Lowville, N. Y., says that the Lewis County Board of Supervisors has voted a $25 bounty on wolf and coyote, and $10 on bobcat. The only reason given is that "several residents had reported seeing the animals".

Is that justification for a bounty? If State officials are against bounties, why are county officials (uninformed as they are in wildlife management problems) empowered to vote them? Why cannot a few wolves and bobcat and coyotes be allowed to live? They are more interesting to wildlife enthusiasts than the overabundant and overprotected deer or the exotic and pampered pheasant, a few of which they would eat. The wolf and the bobcat play a natural role in the wildlife community . . . Can't we grow up now and quit this "villain" and "innocent victim" complex? Certainly the farmer could be paid for damages (by wolves) as he now is for deer damage. It could never be very much. Or are we only giving lip service to the principle of not wanting to exterminate any native animal?

We know that the bobcat contributes to the health of the deer society upon which it preys. The success of a species is often determined, in the long run, by its having the right natural enemies. A surplus of deer will boomerang in time so that it will not benefit the sportsman or the farmer, or any of us.

And may I ask why it is necessary to have another fox-pheasant test when so many have already been made. We know that if foxes are scarce, another predator will take over the job of reducing the surplus game . . . and that if there aren't enough predators, then the much less satisfactory reducers of excess population—starvation and disease—will do the job. We know this. You say it in your excellent magazine. Why not try to sell the sportsmen on these facts then?

I wonder what would happen if we stopped all bounties and all predator control for a few years and concentrated all our efforts on land manage-

m[illegible] Of course if we [illegible] more game species t[illegible] the land can sup[illegible], then we'll never get anywhere at all, will we? It's possible that there is an excess population now in the species hunter and trapper.

Adele Erisman, Mystic, Conn.

● *We hope that our position with regard to predator control and the bounty system has been made clear by two unequivocal (we thought) articles in the two preceding issues of this magazine. We have undergone no change of heart since those articles appeared.*

There remains the job of publicizing the facts as we see them. We have no power to influence county authorities—with regard to the bounty system, for example—in any other way. Also, there are still facts to be discovered and proved with regard to predation, which is the main reason for the current fox-pheasant test. No such test has ever been conducted on a comparable scale.—Editor

FARM POND

Gentlemen: Here is a question the answer to which will, I fancy, interest other readers of the Conservationist. My brother-in-law is considering making a pond on his property near East Chatham, mainly spring-fed and interrupting no year-round watercourse. He would prefer to stock with bluegills and largemouths, but does not want it to become a nightmare of stunted fish, like Mueller's Pond on Long Island and many others.

The main question is whether, under these conditions, he could manage the pond according to the "southern" system, with no closed season or size limits. If not, then will smallmouths use bluegills as forage (I assume they can be limited by controlling the gravel area)?

Do not by any odd chance get the idea that we are spawning bed fishermen. "White perch" anglers at Kensico in June with 3½-inch plugs positively nauseate me, and I am discontinuing membership in the Southern N. Y. Fish & Game Ass'n. on their account. But with people there only on weekends, I'm sure this proposed pond would be underfished if there were any closed season—except perhaps the two weeks of actual spawning.

By the way, we would prefer smallmouth if the bluegill-to-bass chain were as well proven as in the largemouth chain. We would probably fertilize.

Leonard S. Gross, New York City

● *In our last issue we published another letter from Mr. Gross. It said: "Gentlemen: You still smell." We herewith turn the other cheek.*

Legislation fixing bass seasons and creel limits does not allow this Department any discretionary power to make changes based upon individual conditions. Bluegills may be controlled by netting, under a farm fishpond license, but direct control of bass, beyond legal angling, is not provided for at present.

The smallmouth bass-bluegill combination has not been extensively tested, but some southern tests indicate that smallmouths will not adequately control the bluegills. The idea of a balanced pond condition, affording maximum yields with a minimum of attention year after year, is naturally attractive, but in practice it seems that such conditions are almost impossible to attain with warm-water species without a considerable amount of active and sometimes expensive management.

If your pond could support trout, you could avoid such control problems. For trout management the problem is usually simply one of determining the number needed for stocking in order to utilize the productivity of the pond to good advantage. In such ponds, of course, the introduction of warm-water species should be avoided.—Editor

BUM STEER

Dear Sir: If I remember correctly, just before the war it stated in the paper that the Conservation Department had eight million dollars that it didn't use and was giving it toward relief work. What I would like to know is: if the Conservation Department did do this, did they get it back yet? And if not, why not?

Another item I'd like to bring up is pheasants. Why doesn't the Conservation Department try partridge? Surely the partridge is a hardier bird . . . I honestly think it would be worth trying after all our pheasant crop was lost last year, and a little experiment wouldn't cost too much, would it?

Ken Knobel, Rochester

● *There has never been eight million dollars in the Conservation Fund at any one time. To the best of our knowledge no such statement ever appeared in any paper, and if it did, the Department did not approve it. The Conservation Fund never made any contribution to any relief work.*

This Department spent about 15 years experimenting with the propagation of ruffed grouse. They can be raised in captivity, but it's very, very expensive.—Editor

LONG ISLAND PHEASANTS

Dear Sirs: How come such a long pheasant season on Long Island? Where do all the birds they have come from?

E. J. Lenhard, Rochester

● *The pheasant season on Long Island is set by the Legislature, whereas in the rest of the State the season is established by this Department. As to where the birds come from, we can only account for those distributed by us. Nassau and Suffolk counties during the past year received a total of 1,631 pheasants—much less per county than were stocked in your area. —Editor*

SWEET MUSIC

Dear Editor: I am enclosing you a check for $19.00, for which please send the New York State Conservationist to the following schools in the vicinity of Peekskill . . . We think so much of your magazine that we believe the school children can get a lot of good out of it.

R. W. Wheeler, Rec. Sec.
Peekskill Fish & Game Association

BACK TO MR. BAKER

Dear Editor: We must not let the Conservationist deteriorate into a mere wrangle sheet, but if Niagara Falls' Art Baker expects a reply to his letter (August-September Conservationist), I would not fail in courtesy.

Maybe the contents of my letter "could very easily start a revolution" if the situation back of it had not already done so. The revolution is about over. Hadn't you heard, Mr. Baker? You should have. The sportsmen cooperated wonderfully in the defeat of the sportsmen. In a recent local canvass, I was told, "There is nothing left to shoot." Hardly a living animal as far as the eye can see. No game—so no sportsmen, no hunting pressure. That spells freedom for those of us whom the one-seventh of our population thought it could walk upon, "similar to conditions in some countries which we in a free country frown upon."

So you are finally suspecting that the farmer

is taking his own meat. Were you so naive as to think for a moment that he wouldn't? While you were fussing around with your elaborate organizations and playing with the big boys in Albany, the farmer, with surprising finesse, took a very simple and direct method of ending the revolution, or didn't he?

So go up to London to visit the queen, but remember that the little mouse back home is there to be caught by the one who raised him, and only a few fools like me take it out in letter writing. Cheaper to buy your own hunting preserve, the same as we did, isn't it? And hadn't you heard that only lands open to hunters are supposed to be stocked by the State, so how is your little license fee benefiting any landowner?

But there, I must not get hard in view of the flattery which you spoon out to women car operators. Although it does not apply to me, I would like to repay compliment with compliment, and say that neither do I think that all men are lousy drivers. I have heard of one or two who are not.

Edith Coleman, Barton

PUTNAM COUNTY DEER

Dear Editor: I have been hunting in Putnam County for 17 years in the area that is now open for deer. Never in the past have I or my companions seen so many does. The place is overrun with deer, but almost exclusively does. The reason is that there are probably 200 hunters in the woods to every buck, and by our observation, about five guns per acre. If there were an open season on deer of any kind such as they have in Maine, I fully believe that within two days there would be absolutely no deer left at all. I say this to try to explain why there are so few bucks left, in spite of the tremendous deer population.

There is only one solution. Close the buck season entirely until the balance is somewhat normal. This may take years. Provide a limited amount of doe licenses each year to be distributed by drawing, as has proved popular in the past. This will tend to keep the herd down enough so that the farmers can get a little out of their gardens. Some of them whom I know up there have trouble keeping anything in that they plant. This plan will also thin out the ranks of the hunters, and prevent the overcrowding that is taking place today.

No one loves to hunt there more than I do, but I am willing to wait a few years if necessary, and would not like to see the place ruined for years to come.

George Dreyer, Baldwin, L. I.

● *The general problems of deer management in the Catskill region as a whole are discussed on page 12. Of particular significance is the fact that better than 50 per cent of the annual kill in this region consists of yearling bucks, which means—for one thing—that because of small antlers many a buck is mistaken for a doe.*

If, however, the sex ratio were actually as unbalanced as you describe, and the general abundance of deer high, and if this situation were found to exist over a wide area rather than in isolated localities, a doe season such as you recommend would be in order. This Department, through its District Game Managers and other field men, keeps a running check on deer herds throughout the State, and reports such as yours provide useful information.

Deer damage to crops is also a problem for your District Game Manager. Why not discuss it with him? For your district it's Al Bromley, 856 Main Street, Poughkeepsie.—Editor

WELCOME NON-RESIDENT

Gentlemen: I am enclosing my check for a non-resident deer license. Perhaps God in his infinite wisdom will send rain so we can safely enter the woods.

If not, please use my check towards any funds you have to fight the — — — fire.

Howard Newton, New Haven, Conn.

● *Thanks, and good luck.—Editor*

MORE MAPS

Dear Editor: Is it at all possible to get a large map of a certain district of N. Y. State (Catskill Mt. District)? What I would like to get ahold of is a large map of the whole district. . . .

Floyd Gruzleski, Binghamton

● *The quadrangles published by the U. S. Geological Survey (see October-November Conservationist) are the best topographical maps of any section of the State. For larger scale but less topography, this Department publishes Land Maps of both the Catskills and the Adirondacks, showing State-owned land in red. The Catskill Map is in three sections and costs $2.00. The Adirondack Map is in four sections and costs $3.00.—Editor*

SPLIT SEASON

Dear Sir: Since the close of the duck season in 1946, we duck hunters have lived to see the fall of 1947 so we could resume our old pasttime: duck shooting. One long year of waiting and suffering, and all for what? A split season on ducks. . . .

Let's sum things up a little on surrounding territory. Canada, one mile from our shooting grounds, with a 45-day season; Vermont, on the same body of water (Lake Champlain), with 30 days straight—right now we're sitting on our shore and watching Vermont shooters taking the cream of the crop. We admire our great state of New York wanting to be a top conservation state, but why be suckers and try to conserve when other states go ahead and laugh at us?

The pheasant season closed, partridge closed, deer closed, but all were extended on the opening of the woods, so that everyone interested in these sports could have their full time, but to hell with the duck hunters. . . .

G. W. McChesney, Rouses Point

● *As we attempted to explain in the last issue, the split season on ducks was the only possible choice for this State. We could have chosen a straight, 30-day season which might have taken care of you up on Lake Champlain, but have you stopped to think how this would have affected the duck hunters on the Finger Lakes, or down on Long Island? Naturally Vermont chose the 30-day season; they have only Lake Champlain to think about.*

As far as extending the season is concerned (as a result of closing the woods), we requested permission to do this from the Federal Fish and Wildlife Service. The request was denied.—Editor.

BLACKWELLS AND BENOITS

Gentlemen: As a fellow newspaper man, I was inclined to wonder whether the mention of the Benoit family in P. W. Fosburgh's article "1/6th of the State" does not constitute a violation of the Social Welfare Law which prohibits publication of names of persons on relief.

William J. Embler, Albany

Gentlemen: I was much impresed with your photograph and verbal description of the Blackwell Place. For some time now I have been contemplating the acquisition of such an abandoned farm, and the Blackwell Farm would, I think, exactly suit my needs. Could you give me explicit information as to the present ownership of this place, and how it might be bought?

Howard Kestow, Cleveland, Ohio

Dear Sir: I was very much interested in your article "1/6th of the State." Is there any source of information I could apply to for a list of available farms within a reasonable distance of New York City? My purpose would be to use it for a summer home at present and perhaps through good conservation methods bring it back sufficiently for subsistence (not commercial) farming in the future.

R. E. Motl, Long Island City

● *All names used in this article were fictitious, and persons and places described were imaginative. We should have printed a statement to that effect along with the article. We've had six inquiries from prospective purchasers of the Blackwell Place, and others concerning the possibility of buying similar farms. The problems of acquiring and reconditioning such land will be discussed in future issues.—Editor*

POLLUTION

Dear Sir: The article "Pollution Report" by Harold C. Ostertag which appeared in the October-November Conservationist raises several pertinent questions which should be answered.

He proposes a new centralized enforcement authority. Why not make the present group do their job? He proposes new laws. Why not enforce the present laws? In particular, a great deal could be accomplished by enforcement of Article 3, Section 33 of the Navigation Law, which reads: "No person shall drain, deposit or cast any dead animal, carion, offal, excrement, garbage, or other putrid or offensive matter into the navigable waters of the State, except as the same may be authorized by the State Department of Health. Every person violating the provisions of this section shall upon conviction by a court of competent jurisdiction be guilty of a misdemeanor punishable by a fine of not to exceed one hundred dollars or by imprisonment of not more than one year, or by both such fine and imprisonment for each offense. The District Attorney of the county in which the offense is committed or exists is authorized and directed to prosecute such offender or offenders."

Arthur E. Newkirk, Schenectady

● *As Mr. Ostertag pointed out in his article, and as Mr. Newkirk undoubtedly knows, law and its enforcement are not the major aspects of our present day pollution problem; rather, industrial leaders, health officials, conservationists, and many others are trying to work out an entirely new and amicable approach to a solution.*

But, with regard to the points raised by Mr. Newkirk, this can be said: Navigation Law is administered by the Superintendent of Public Works, a fact which further indicates the division of responsibility for pollution control, and the need for doing something about it. In addition, the passage quoted applies only to navigable waters, does not clearly apply to industrial pollution, and is further limited in that it is indirectly geared to the Public Health Law. —Editor

ALL IN THE DAY'S WORK, ETC.

Gentlemen: (1) What's the difference between dry sand and green sand? (2) What's the difference between a cold chisl and a wood chisl? (3) What saw do we use when?

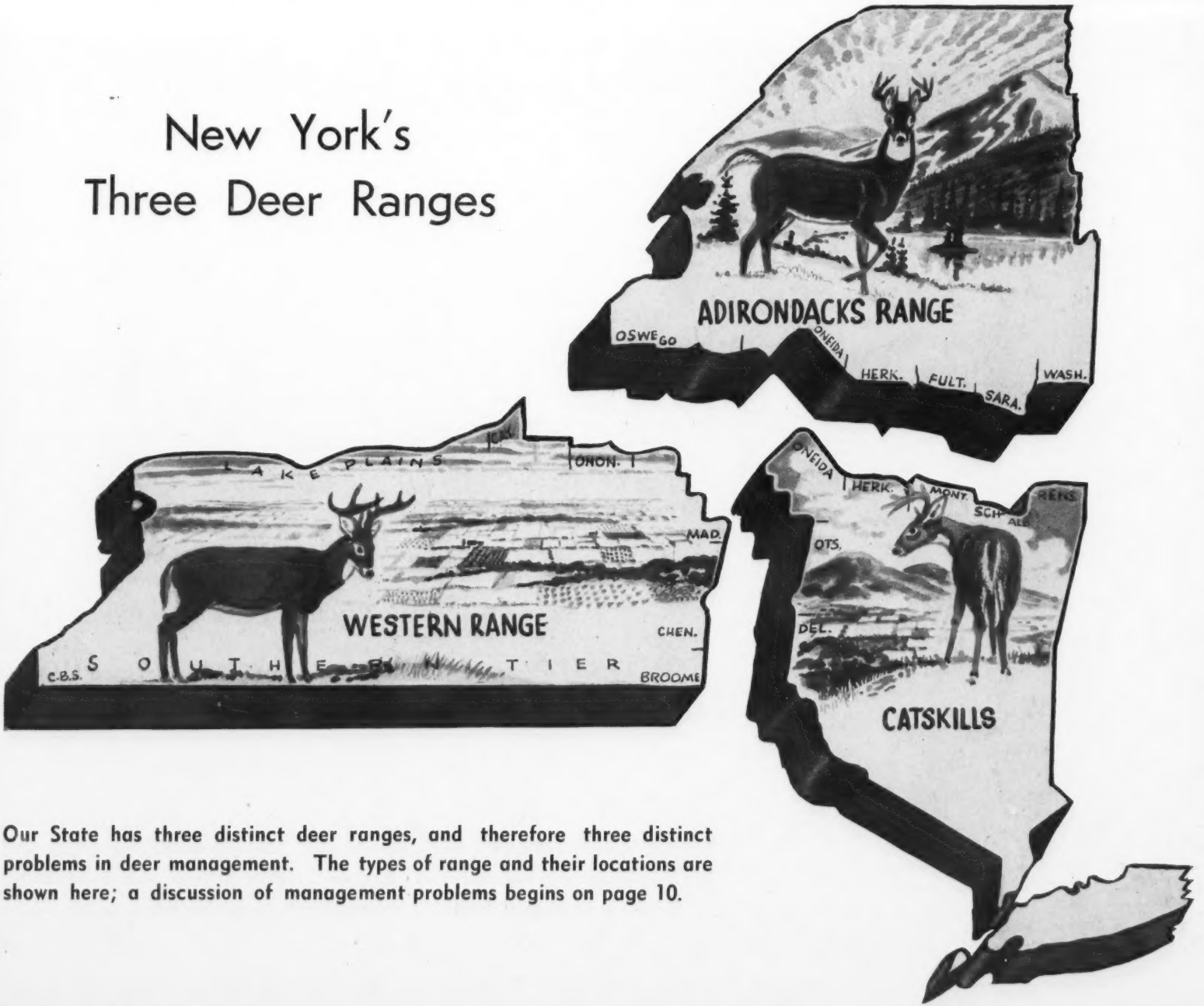
Clarence Plummer, Union

● *(1) Dry sand is just what it says it is. Greensand (one word) is defined by Webster as "a sedimentary deposit consisting, when pure, of dark greenish grains of glauconite . . . or iron potassium silicate". (2) A cold chisel is one tempered for cutting cold metal; a wood chisel is one tempered for cutting wood. (3) We give up.—Editor*

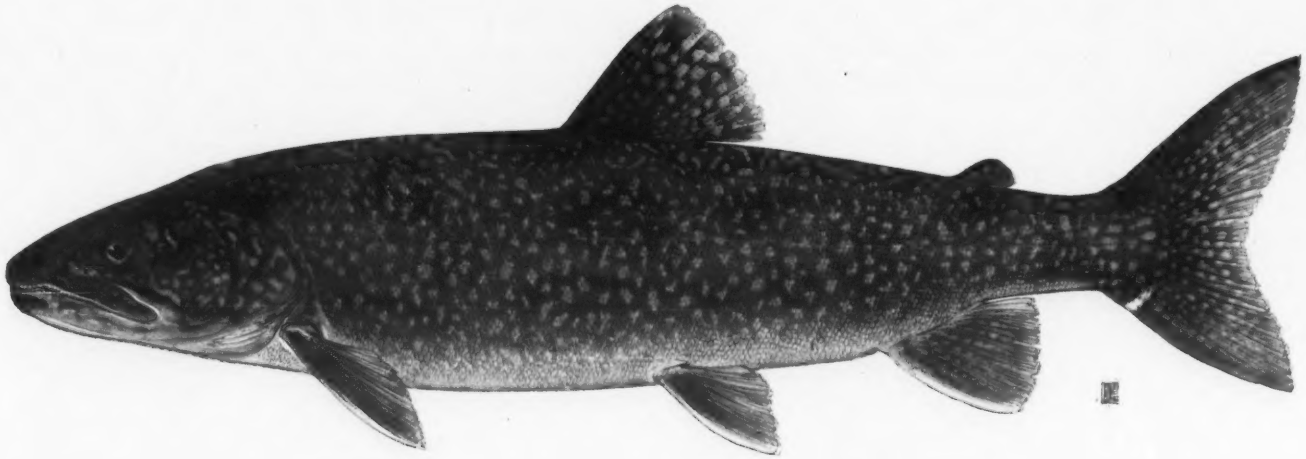
PHOTO CREDITS

First cover, Clayt Seagears; second cover, pages 14, 15, 16, Doug Finch; pages 8, 24, 25, Earl McGuirk; page 7, Ed. Driscoll; page 20, Fayetteville-Manlius Rod & Gun Club; page 23, Walt Crissey; back cover, Ellen Edmonson.

New York's Three Deer Ranges



Our State has three distinct deer ranges, and therefore three distinct problems in deer management. The types of range and their locations are shown here; a discussion of management problems begins on page 10.



LAKE TROUT

Cristivomer namaycush

From female 23½ inches long